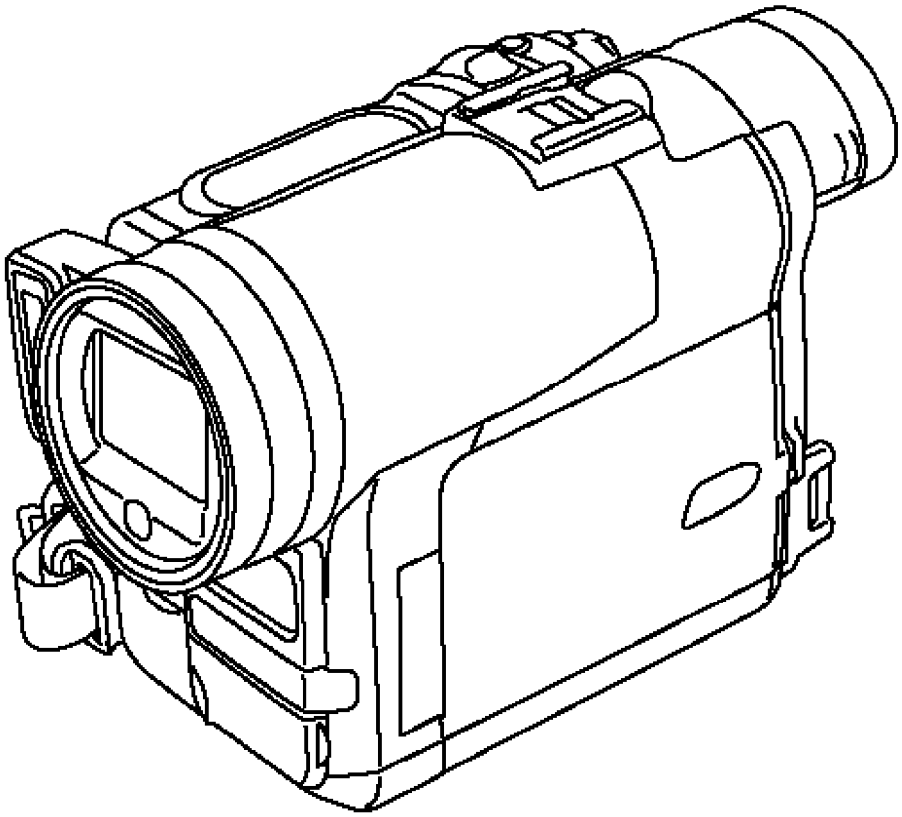
ORDER NO.VMD0204025C8

Service Manual

Digital Video Camera/Recorder

Panasonic Mini DV PAL CERTIFIED USB MultiMediaCard™ SD™

NV-GX7EG
NV-GX7EGM
NV-GX7B
NV-GX7EN
NV-GX7A
NV-GX7ENT
VOL.1
Q3-MECHANISM



SPECIFICATIONS

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Digital Video Camera

ITEM	SPECIFICATION
POWER	Source: DC 7.9 / 7.2 V Consumption: Recording 3.7 W (When using Viewfinder) 4.7 W (When using LCD Monitor)
RECORDING FORMAT	Mini DV (Consumer-use Digital Video SD Format)
TAPE USED	6.35 mm digital video tape
RECORDING / PLAYBACK TIME	SP mode: 80 min. with DVM80 LP mode: 120 min. with DVM80
CAMERA	Filter Diameter: 37.0 mm
	Zoom: 10:1 Power Zoom
	Monitor: 2.5-Inch LCD
	Lens: Auto Iris, F1.8, Focal Length: 3.55 - 35.5 mm Macro (Full Range AF)
	Image Sensor: 1/4-inch CCD Image Sensor
	Viewfinder: Colour Electronic Viewfinder
VIDEO	Recording System: Digital Component
	Television System: CCIR; 625 Lines, 50 Fields PAL Colour Signal
	Video Output Level: 1.0 Vp-p, 75Ω S-Video Output Level: Y Output; 1.0 Vp-p, 75Ω C Output; 0.3 Vp-p, 75Ω Video Input Level: 1.0 Vp-p, 75Ω S-Video Input Level: Y Input; 1.0 Vp-p, 75Ω C Input; 0.3 Vp-p, 75Ω
AUDIO	Recording System: PCM Digital Recording 16 bit (48 kHz/2 ch) 12 bit (32 kHz/4 ch)
	Audio Output Level (Line): 316 mV, 600Ω Audio Input Level (Line): 316 mV, 10 kΩ or more Mic Input: Mic sensitivity -50dB(0dB=1V/Pa,1kHz) (Stereo Mini Jack)
CARD MEMORY FUNCTIONS	Recording Media: SD Memory Card, MultiMediaCard Image Compression: JPEG Video Compression: MPEG4 Still Image Size: Mega-Pixel Recording; 1280 X 960 (1.23 million pixels) VGA Recording; 640 X 480 Sound Compression: G.726

ITEM	SPECIFICATION
STANDARD ILLUMINATION	1,400 lx
MINIMUM REQUIRED ILLUMINATION	1 lx (Colour Night View Mode)
USB / Mini System Ⓔ	Card reader / writer function, USB 2.0 compliant (maximum 12Mbps) No copyright protection support / Mini System editing terminal
DIGITAL STILL PICTURE	Digital Still Picture Output, Control Signal Input / Output (Transfer rate: max. 115 kbps)
DIGITAL INTERFACE	DV Input/Output Terminal (IEEE1394, 4-pin)
MICROPHONE	Stereo
SPEAKER	1 round speaker ϕ20 mm
VIDEO FLASH	GN 6
OPERATING TEMPERATURE	0 - 40 ˚C
OPERATING HUMIDITY	10 - 80 %
WEIGHT	Approx. 550 g(without Battery and DV Cassette) Approx. 630 g(with CGR-D08R and DVM60)
DIMENSIONS	Approx. 71 (W) x 93 (H) x 139 (D) mm
STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack Unit 1 pc. DC Cable 1 pc. AC Cord 1 pc. AC Cord ; NV-GX7EN/ENT 1 pc. AV Cable 1 pc. Remote Controller 1 pc. Bottom-type Battery 1 pc. Head Cleaner ; NV-GX7EN/A/ENT 1 pc. Hood Cap Unit 1 pc. Hood Strap 1 pc. Driver Soft 1 pc. USB Connection Cable 1 pc. SD Card 1 pc. Shoulder Belt 1 pc. Mega Hood 1 pc. Universal Remote Controller

Weight and dimensions are approximate values.
Specifications may change without prior notice.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. INTRODUCTION

1.1. INTRODUCTION

This service manual contains technical information which will allow service personnel's to understand and service this model.Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.
Information for Q-Mechanism should be referd to the another manual as below.
Order No. : VMD0109026C8

Note 1:
These movie cameras use AC Adaptor is VSK0581-A.
The service manual for AC Adaptor is separate volume.
Order number for AC Adaptor .....VSK0581-A : VMD0105013C8

Note 2:
1) This service manual does not contain the following information, because of the impossibility of sevicing at component level.

1. Schematic Diagram, Block Diagram and C.B.A. layout of Main C.B.A./ Sub C.B.A.

2. Parts List for individual parts of Main C.B.A./ Sub C.B.A.

3. Exploded View and Parts List for individual parts of Mechanism Unit.

2) The following category is/are recycle module part. Please send it/them to Central Repair Center.
***Main C.B.A. (VEP03G17K)**
***Sub C.B.A. (VEP23567B)**

When a part replacement is required for repairing each Main C.B.A. and/ or Mechanism block, replace the assembly parts.
(Main C.B.A., Sub C.B.A. and/ or Mechanism Unit)
The following circuits are contained in Main C.B.A.

1. Main Connection Circuit

2. Drive Circuit

3. Video 1 Circuit

4. Video 2 Circuit

5. Control Circuit

6. LCD Circuit

7. Head/ Rec Amp Circuit

8. Power Circuit

The following circuits are contained in Sub C.B.A.

1. Sub Connection Circuit

2. Camera Circuit

3. Lens Drive Circuit

4. Ex Input Circuit

5. DSC Circuit

6. SD Audio Circuit

1.2. FEATURE COMPARISON CHART

FUNCTION	EG	EGM	B	EN	A	ENT
ard Function (Multi Media Card, D Card)	●	●	●	●	●	●
xternal DV/ VIDEO Input	●	●	●	●	●	●
PEG4 Recording	●	●	●	●	●	●

2. CAUTION FOR AC CORD (VJA0940 TYPE)

2.1. INFORMATION FOR YOUR SAFETY

IMPORTANT
Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

FOR YOUR SAFETY
DO NOT REMOVE THE OUTER COVER
To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2.2. CAUTION FOR AC MAINS LEAD

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amperes and it is approved by ASTA or BSI to BS1362
Check for the ASRA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.
If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safety.
There is a danger of severe electrical shock if the cut off plug is inserted into any 13-ampere socket.
If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt, please consult a qualified electrician.

2.2.1. Important

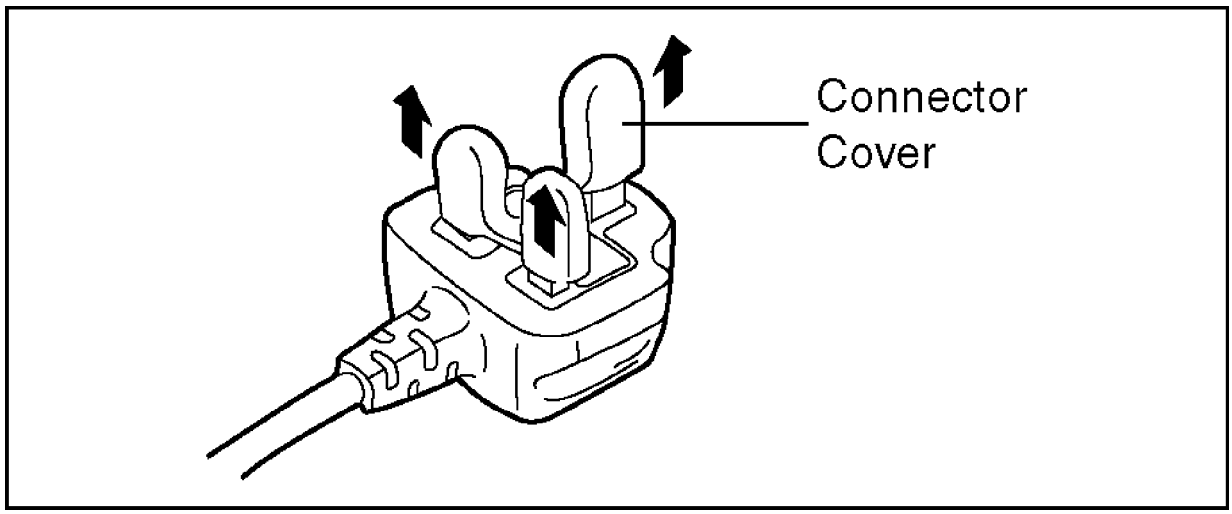
The wires in this mains lead are coloured in accordance with the following code:

Blue	**Neutral**
Brown	**Live**

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.
Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.

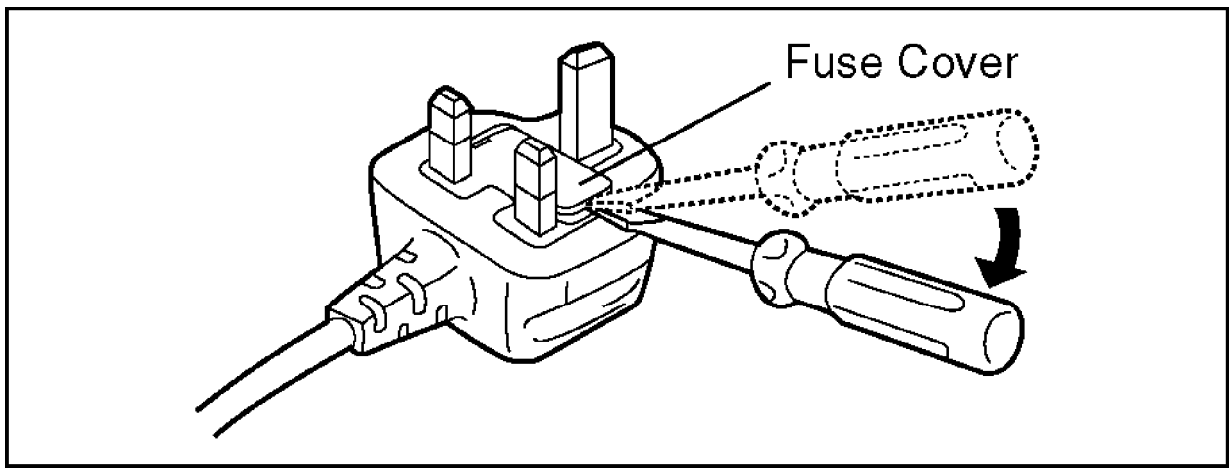
2.2.2. Before use

remove the Connector Cover as follows.

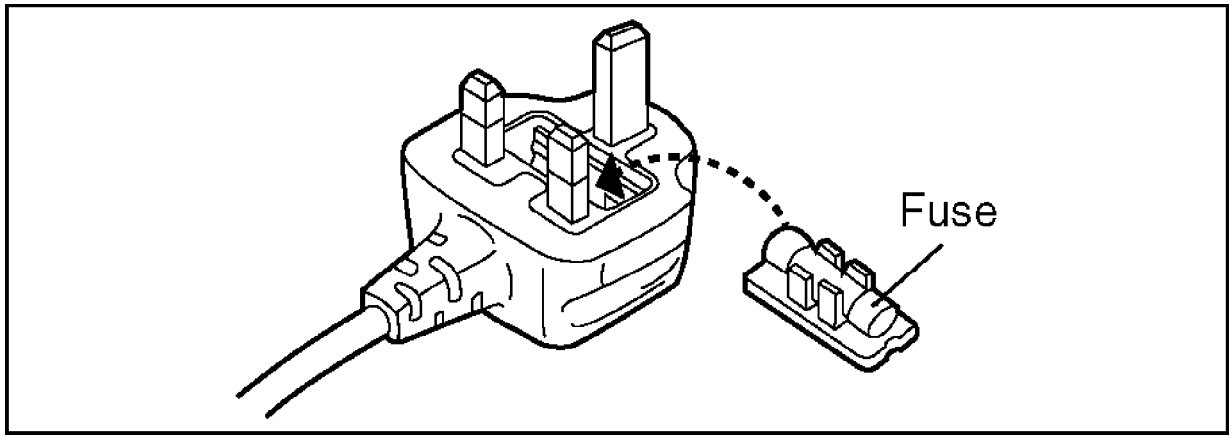


2.2.3. How to replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.

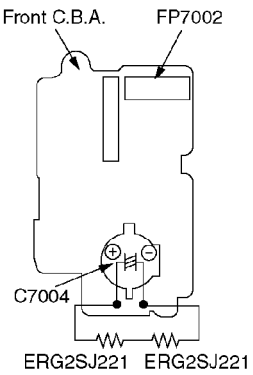


3. SERVICE CAUTION

3.1. HOW TO DISCHARGE THE CAPACITOR ON FRONT C.B.A.

CAUTION
Be sure to discharge the capacitor on Front C.B.A. before disassembling.
CAUTION
Be careful of the high voltage circuit on Front C.B.A. when servicing.

Method:
1.Prepare the 2 Resistors (ERG2SJ221:220 ohm/2w) for discharge.
Note:
Above 2 Resistors may be substituted with equivalent type.
2.Make short circuit using 2 Resistors between C7004(+) and C7004(-) for 3 seconds as follows.
3.After discharging, confirm that the capacitor voltage is sufficiently lowered using a voltmeter



3.2. EEPROM DATA FOR SPARE PARTS OF THE MAIN C.B.A.

When the Main C.B.A. is replaced, the fixed and average data must be changed by Tatsujin kit according to the Movie Camera's suffix.
Then, confirm and/or adjust the VTR and Camera section one by one.

3.3. SERVICE EXTENSION CABLES

This models is required the following extension cables for all connections.

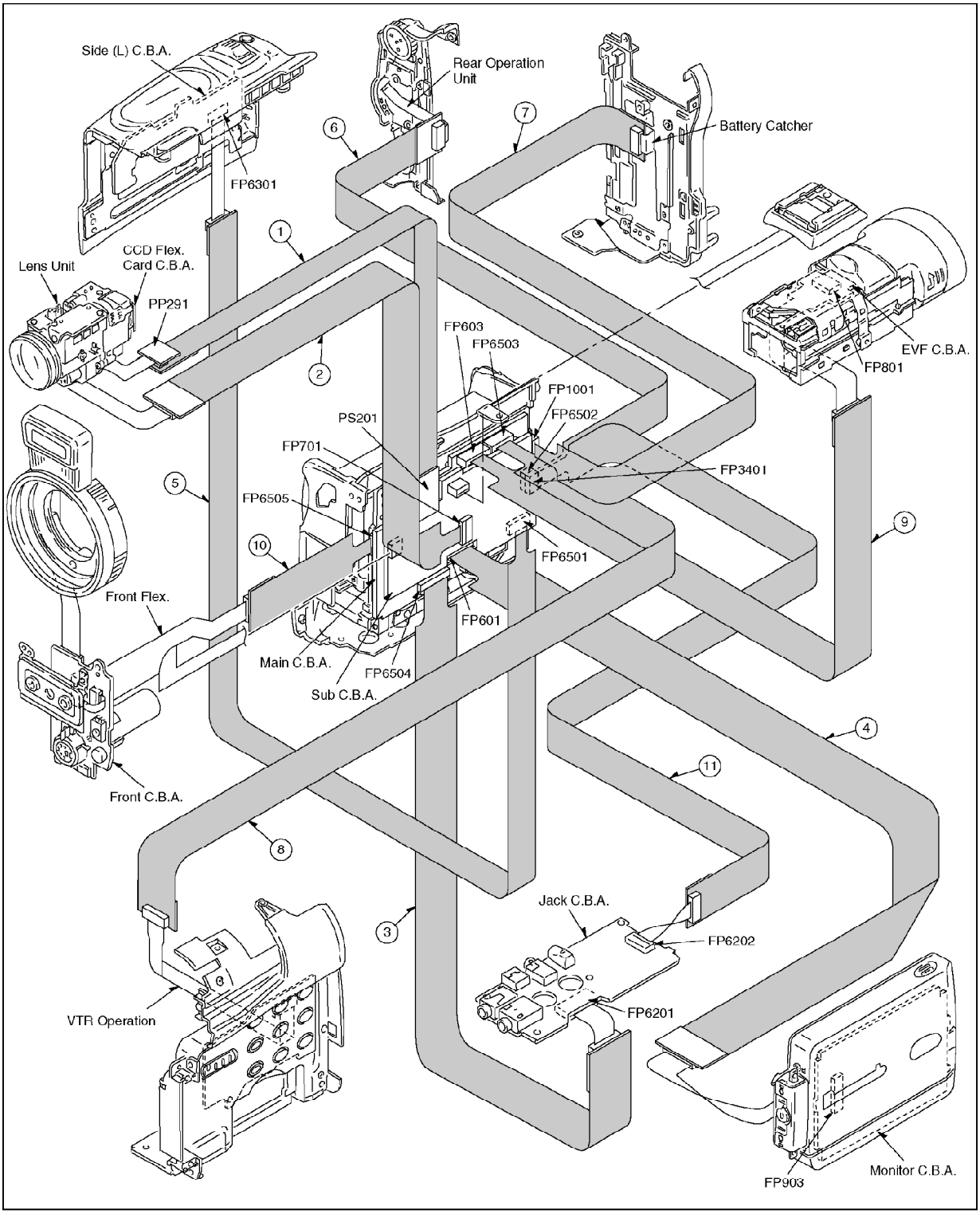
Note 1:
Use the following extension cables when checking or adjusting individual circuit boards except module Parts.

(Main C.B.A. and Sub C.B.A.)

Ref.	Part No.	Pin	Part Name	Connection	Q'ty	Remarks
(1)	VFK1460	20	Flat Cable	PS201 (Sub) - PP291 (CCD)	1	as NV-EX1
(2)	VFK1491	27	Flat Cable	FP701 (Sub) - Lens Unit	1	as NV-DS99
(3)	VFK1459	39	Flat Cable	FP6504 (Main) - FP6201 (Jack)	1	as NV-EX1
(4)	VFK1492	26	Flat Cable	FP601 (Main) - FP903 (Monitor)	1	as NV-DS99
(5)	VFK1442	21	Flat Cable	FP6501 (Main) - FP6301 (Side L)	1	as NV-DS77
(6)	VFK1452	17	Flat Cable	FP6502 (Main) - Rear Operation	1	as NV-DS77
(7)	VFK1364	14	Flat Cable	FP1001 (Main) - Battery Catcher	1	as NV-DS55
(8)	VFK1443	18	Flat Cable	FP6503 (Main) - VTR Operation	1	as NV-DS99
(9)	VFK0977	20	Flat Cable	FP603 (Main) - FP801 (EVF)	1	as NV-DS55
(10)	VFK1452	17	Flat Cable	FP6505 (Main) - Front Flex.	1	as NV-DS77
(11)	VFK1440	10	Flat Cable	FP3401 (Sub) - FP6202 (Jack)	1	as NV-DS77

How to use extension cables.

Fig. T1-1



3.4. LOCATION FOR SPARE CONNECTORS OF THE MAIN C.B.A. & SUB C.B.A.

3.4.1. MAIN C.B.A.

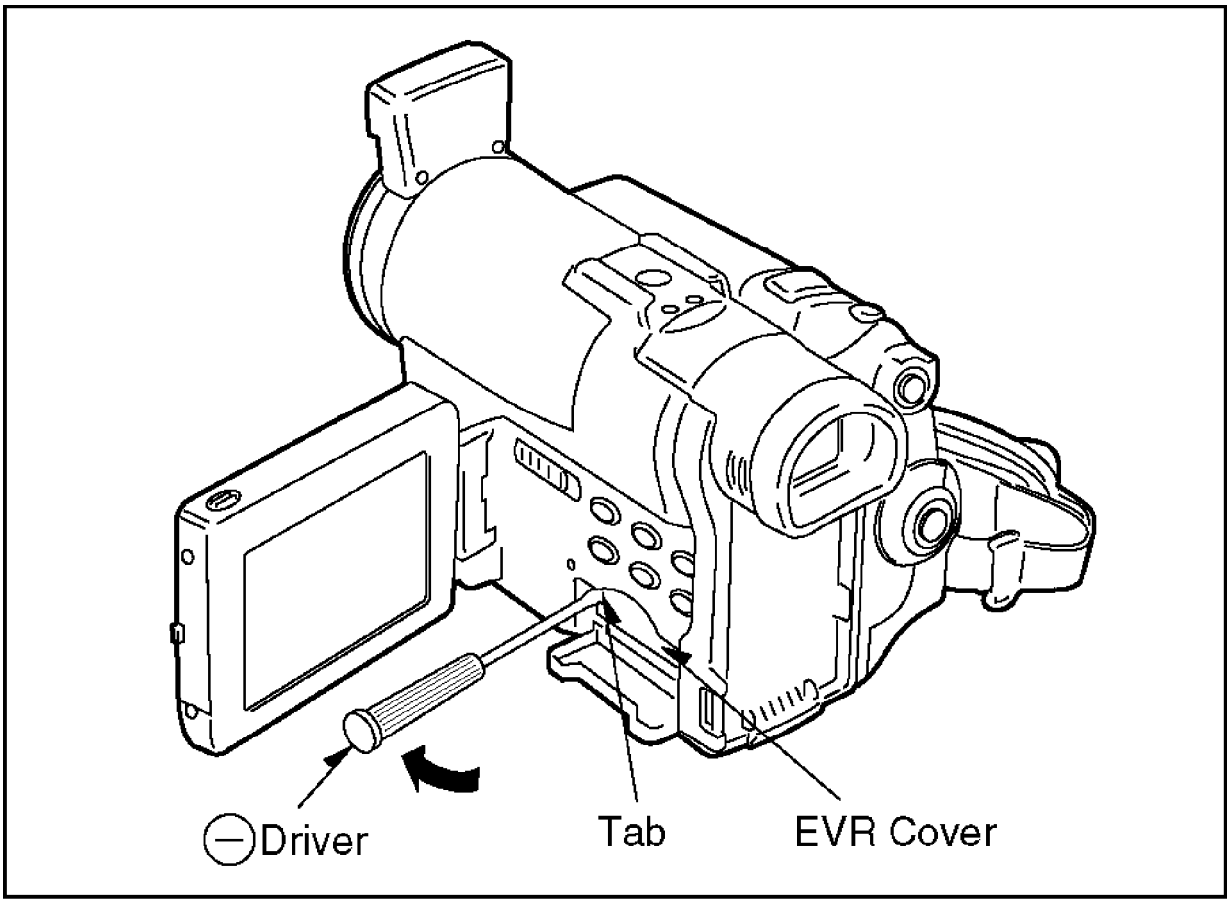
3.4.2. SUB C.B.A.

4. PREPARATION FOR ELECTRICAL ADJUSTMENT

1. Unlock the locking tab and remove the EVR connector as shown in Fig. E1 .

2. Then connect the following cables as shown in Fig. E2 .

Fig. E1



Part No.	Part Name	Q'ty	Remarks
VFK1395	232C(M3.5)I/F Cable	1	
VFK1308E	Measuring Board	1	
VFK1309	EVR Connector Board	1	
VFK1317 or VFK1511	30 Pin Flat Cable	2	200mm Type 300mm Type
VJA0941	DC Output Cable	1	For AC Adaptor
VFK1164TAR37	Step up Ring	1	For Collimator
VFK1714	Connection Adaptor (30pin)	1	
VFK1763	Connection Adaptor (60-30pin)	1	

Fig. E2

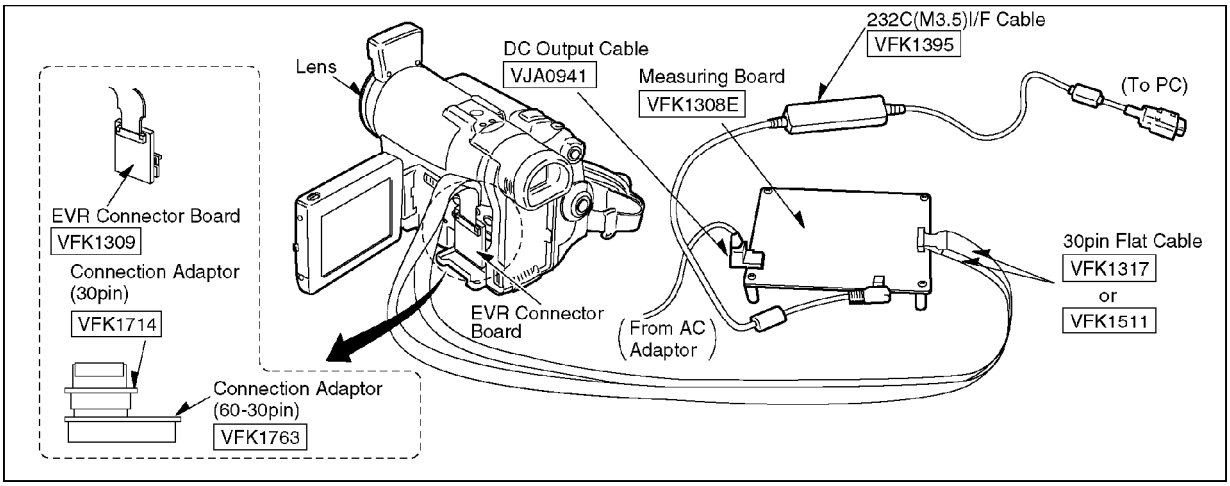
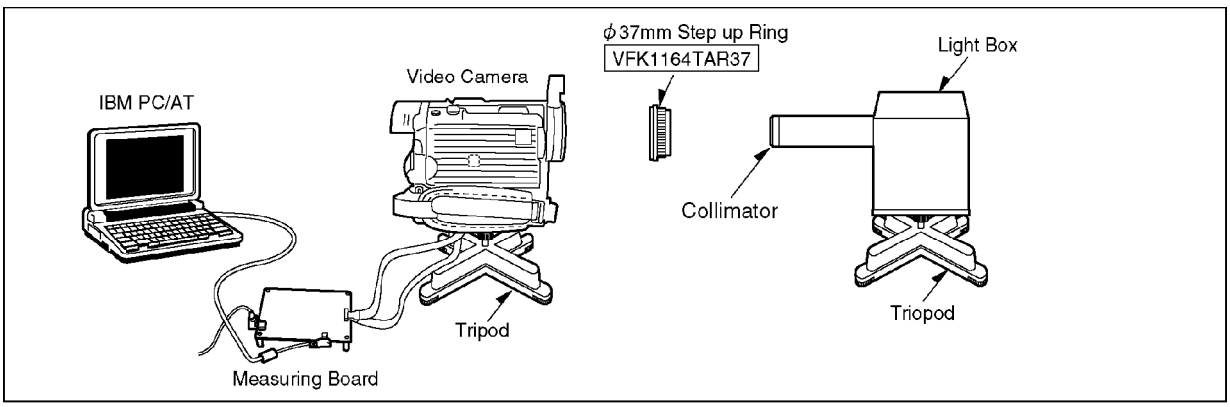


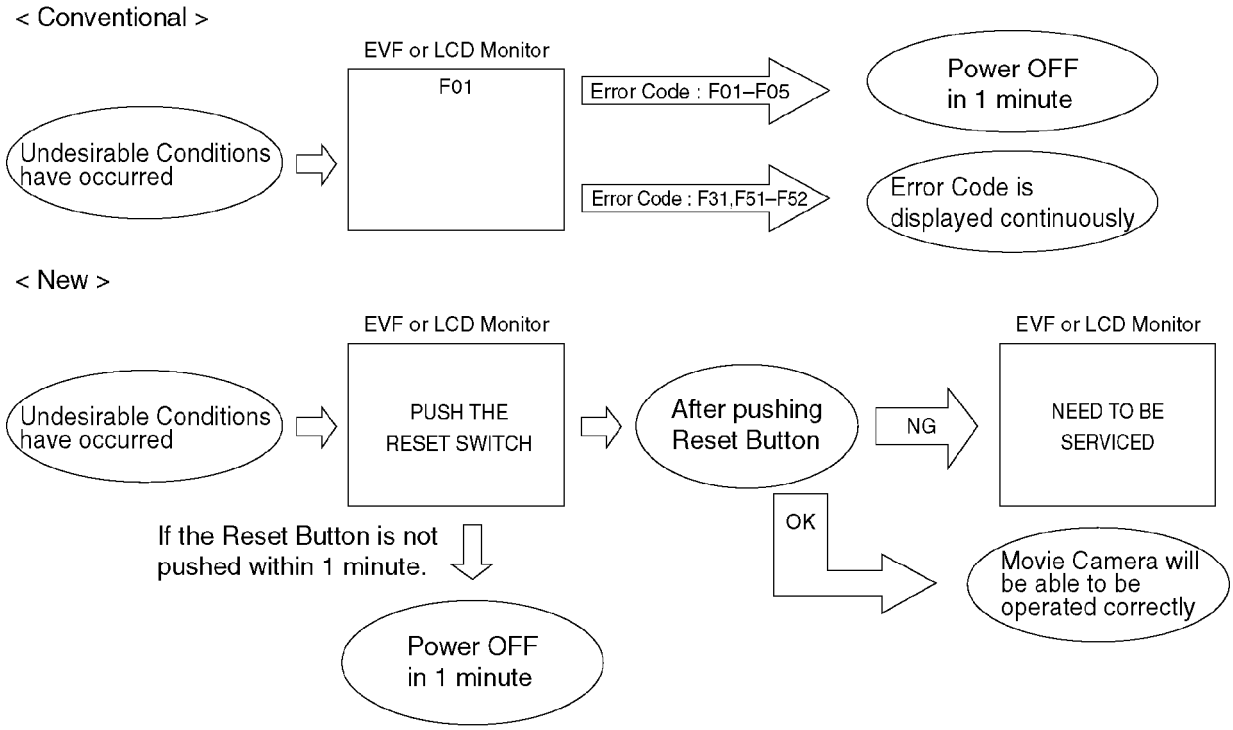
Fig. E3



5. SERVICE MODE

5.1. New Error Code Display

Conventionally, the error code has been displayed automatically on the EVF or LCD Monitor when undesirable conditions have occurred. With the New Error Code Display, the error code has not been displayed automatically as follows except some error codesF31(Data Transmission Error), U10(Dew) and U11(Head Clogging).


< Conventional >
EVF or LCD Monitor
F01
Undesirable Conditions have occurred
Error Code : F01–F05
Power OFF in 1 minute
Error Code : F31,F51–F52
Error Code is displayed continuously
< New >
EVF or LCD Monitor
Undesirable Conditions have occurred
PUSH THE RESET SWITCH
After pushing Reset Button
NG
EVF or LCD Monitor
NEED TO BE SERVICED
OK
Movie Camera will be able to be operated correctly
If the Reset Button is not pushed within 1 minute.
Power OFF in 1 minute

Note:

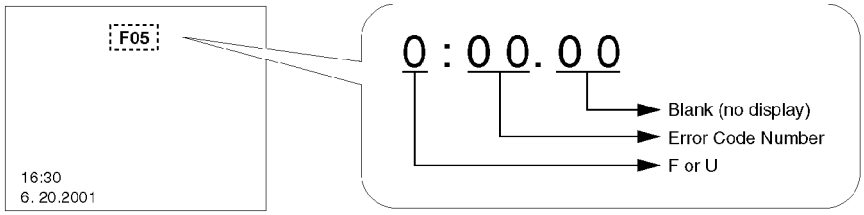
1. **The only some error codes F31, U10 and U11 has displayed automatically on the EVF or LCD monitor as usual.**
2. **The Power LED also has been flashed for 1 min. when undesirable condetions have occurred.(See below)**

5.2. Viewing Error Code

When displaying the Error Code on the EVF or LCD Monitor, push the FADE/ STOP and REC START/PAUSE buttons simultaneously for more 3 seconds.

Note:

When the cassette tape is inserted, this operation will not be worked.



EVF or LCD Monitor

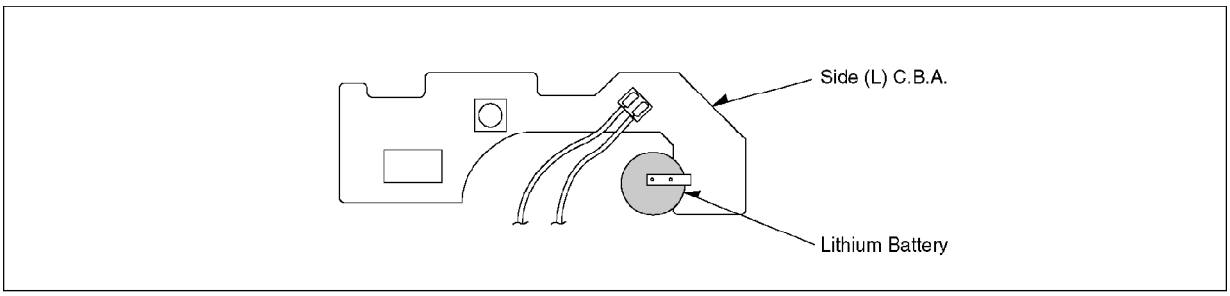
DISPLAY	CONDITION	POWER OFF TIMING / POWER LED FLASHING TIMING
F01	T-Reel Lock	After 1 minute flashing the LED
F02	S-Reel Lock	After 1 minute flashing the LED
F03	Unloading Lock	After 1 minute flashing the LED
F04	Loading Lock	After 1 minute flashing the LED
F05	Cylinder Lock	After 1 minute flashing the LED
F31	Data Transmission Error	Not turning OFF
F51	Zoom Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
F52	Focus Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
U10	Dew Detection	After 18 seconds flashing the LED Power LED is flashed at 1 Hz timing
U11	Head Clogging	Not turning OFF

6. HOW TO REPLACE THE LITHIUM BATTERY (PROCEDURE)

1. Remove the Side (L) C.B.A.. (Refer to Disassembly Procedures.)

2. Unsolder the Lithium Battery “VSB0407” and then replace the new one. (See Fig. B1 .)

Fig. B1



Note:
The lithium battery is a critical component. (Type No.: VSB0407 Manufactured by Panasonic.)

It must never be subjected to excessive heat or discharge.
It must therefore only be fitted in equipment designed specifically for its use.
Replacement batteries must be of the same type and manufacture.
They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.
Do not attempt to re-charge the old battery or re-use it for any other purpose.
It should be disposed of in waste products destined for burial rather than incineration.

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

PRECAUTION
Le fait de remplacer incorrectement la pile peut présenter des risques d'explosion. Remplacer la pile uniquement par une pile identique ou de type équivalent recommandée par le fabricant. Se débarrasser des piles usagées conformément aux instructions du fabricant.

VORSICHT
Bei einer falsch eingesetzten Batterie besteht Explosionsgefahr. Nur mit einer vom Hersteller empfohlenen Batterie vom gleichen Typ ersetzen. Verbrauchte Batterien beim Fachhändler oder einer Sammelstelle für Sonderstoffe abliefern.

VARNING
Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering. Udskiftning má kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

7. OPERATING GUIDE

8. ADJUSTMENT PROCEDURES

8.1. DISASSEMBLE FLOW CHART

This flow chart indicates the disassembly steps the cabinet parts, C.B.A. and Mecha. Unit in order to access to be serviced. When reinstalling, perform the steps in the reverse order.

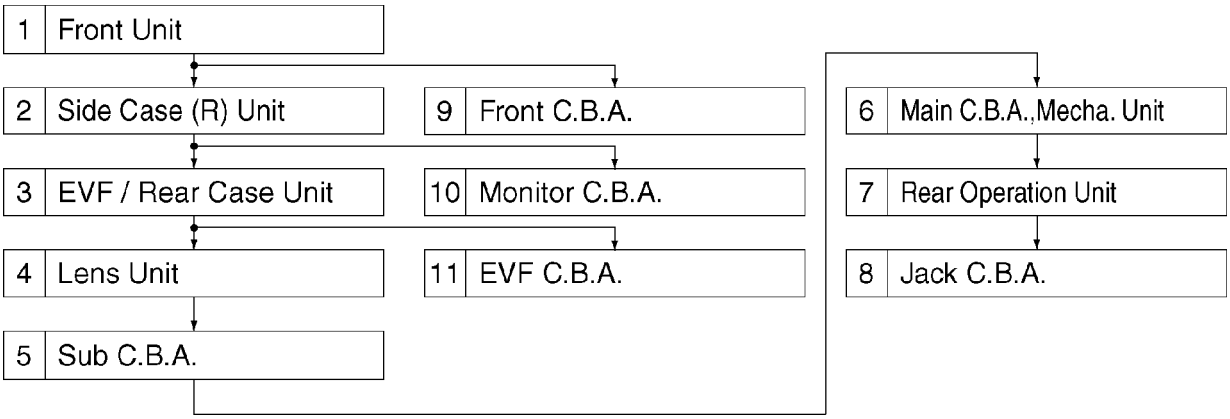
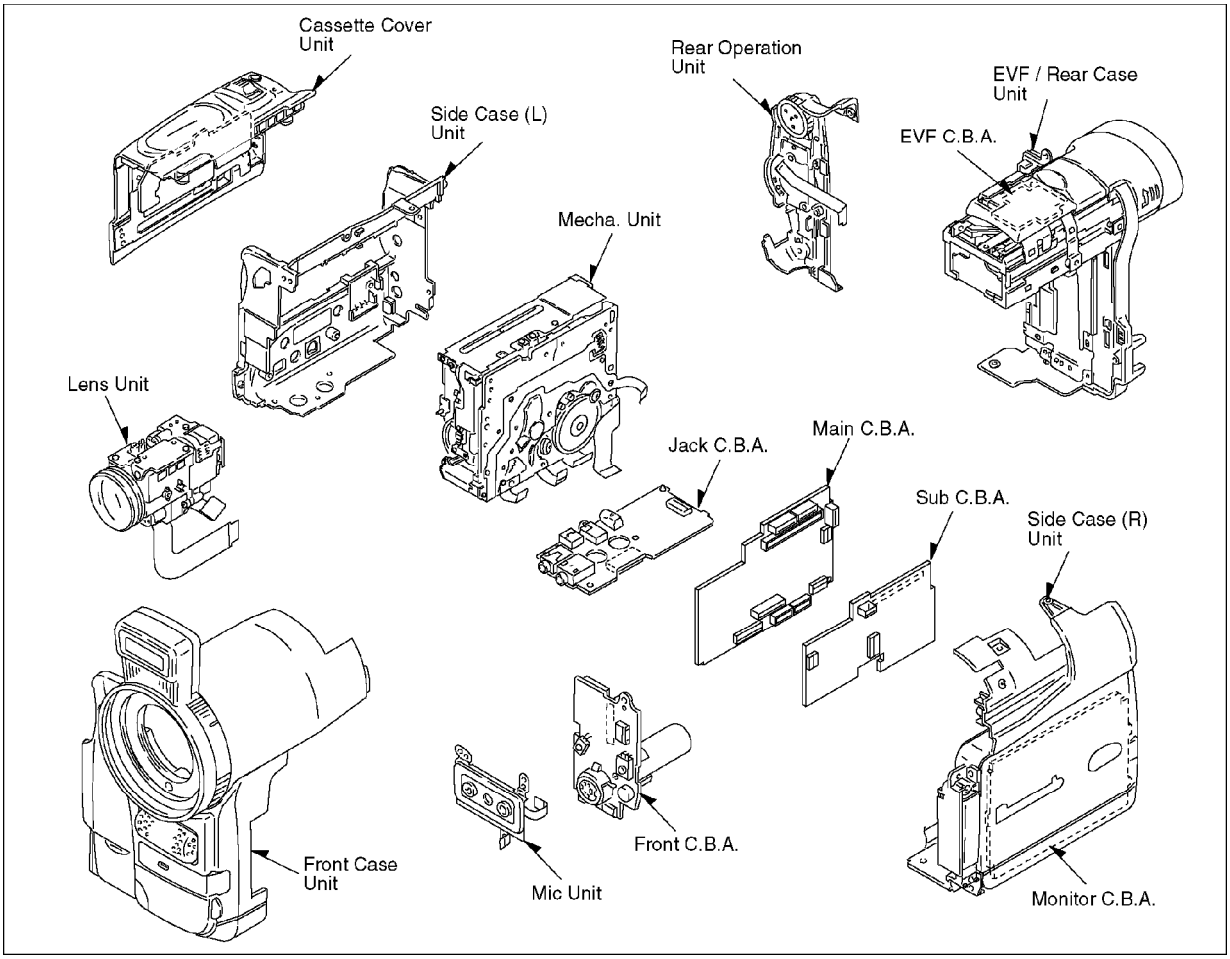


Fig. F1



8.2. DISASSEMBLY PROCEDURES

Flow-Chart for Disassembly Procedure

No.	Item / Part	Fig.	Removal (Screw,Connector,Flex. & Other)
1	Front Unit	Fig. D2	2-Screws (A),1-Screw (B)
		Fig. D3	1-Screw (C) 1-Connector FP4801 Front Unit
2	Side Case (R) Unit	Fig. D4	1-Screw (E)
		Fig. D5	2-Screws (F)
		Fig. D6	1-Screw (G),1-Screw (H),2-Screws (I) 2-Connectors FP601, FP6503 Side Case (R) Unit
3	EVF / Rear Case Unit	Fig. D7	1-Screw (J)
		Fig. D8	2-Screws (K), 1-Screw (L)
		Fig. D9	1-Screw (M), 1-Screw (N) 3-Connectors FP603, FP1001, FP3402 EVF / Rear Case Unit
4	Lens Unit	Fig. D10	2-Screws (O) 2-Connectors FP701, PS201 1-Screw (P) Lens Flame (L) Lens Unit
5	Sub C.B.A.	Fig. D11	3-Connectors FP3401,FP4002,PS3001 Sub C.B.A.
6	Main C.B.A., Mecha. Unit	Fig. D12	4-Screws (Q) 4-Connectors FP6501, FP6502, FP6504, FP6506 4-Tabs Main C.B.A. / Mecha. Unit
		Fig. D13	5-Connectors FP2201, FP2202, FP2203, FP2204, FP5001 Main C.B.A. 3-Screws (R) Mecha. Unit
7	Rear Operation Unit	Fig. D14	Jack Cover Open 3-Screws (S),1-Screw (T) Rear Operation Unit

No.	Item / Part	Fig.	Removal (Screw,Connector,Flex. & Other)
8	Jack C.B.A.	Fig. D15	4-Screws (U) Jack C.B.A.
9	Front C.B.A.	Fig. D16	Be sure to discharge the capacitor on Front C.B.A. 5-Screws (V) 2-Connectors FP4802,FP7002 Front C.B.A.
10	Monitor C.B.A.	Fig. D17	2-Screws (W) LCD Unit
		Fig. D18	2-Screws (X),2-Screws (Y) 6-Tabs LCD Case (Upper) Unit 1-Connector FP903 LCD Hinge Unit
		Fig. D19	1-Connector FP901
		Fig. D20	3-Tabs 2-Solder Portion Monitor C.B.A.
11	EVF C.B.A.	Fig. D21	1-Screw (Z) 1-Tab Rear Case Unit EVF Unit
		Fig. D22	1-Screw (a) 4-Tabs 1-Screw (b) EVF Slide Piece
		Fig. D23	2-Screws (c),2-Screws (d) EVF Slide Cover EVF Hinge Unit
		Fig. D24	6-Tabs EVF Case (Lower) EVF Case (Upper) EVF (1) Unit Eye Cap Unit / EVF View Adj. Unit
		Fig. D25	4-Tabs 2-Connectors FP801, FP802 EVF Flex. EVF C.B.A.

Fig. D1

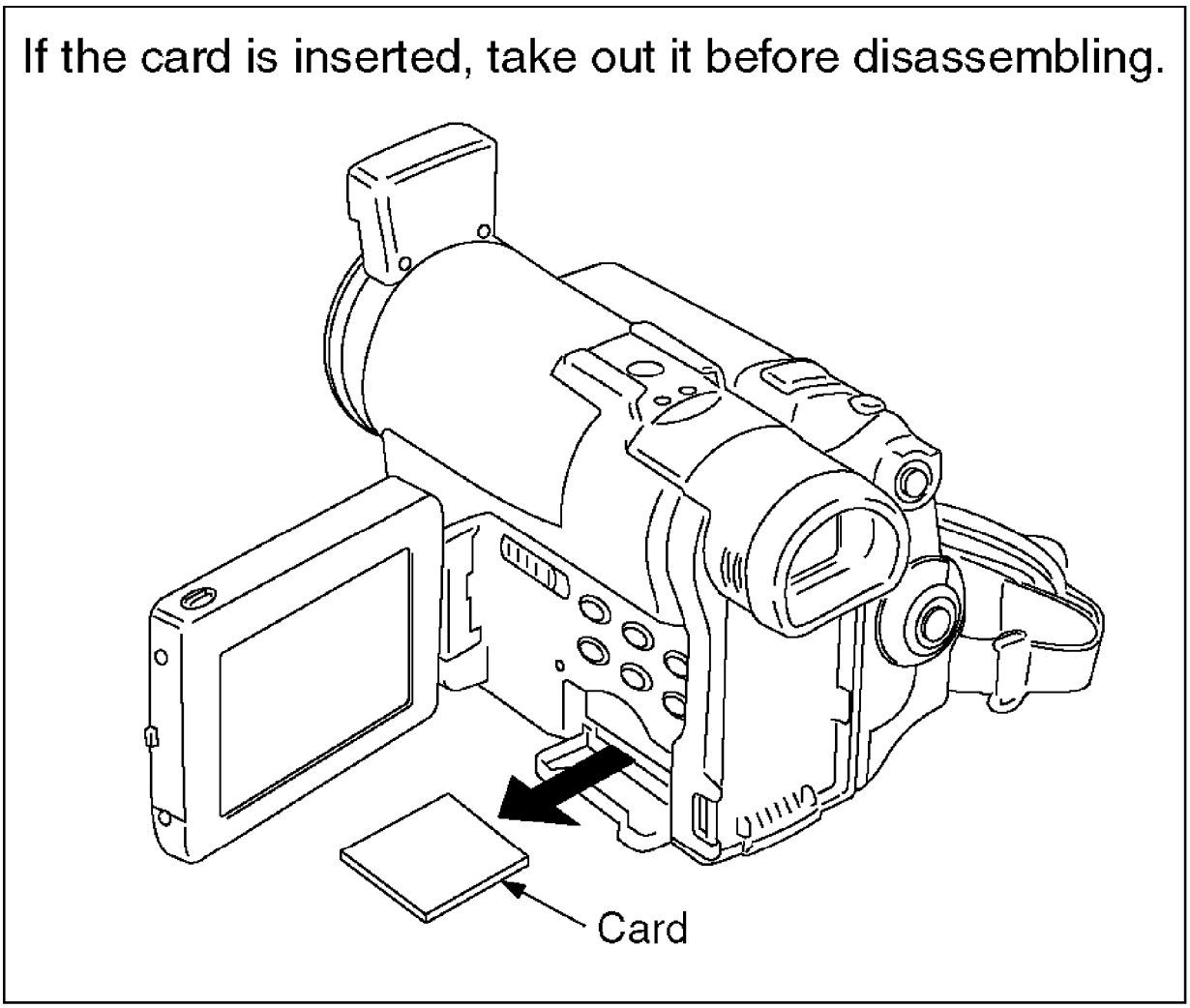

If the card is inserted, take out it before disassembling.
Card

Fig. D2

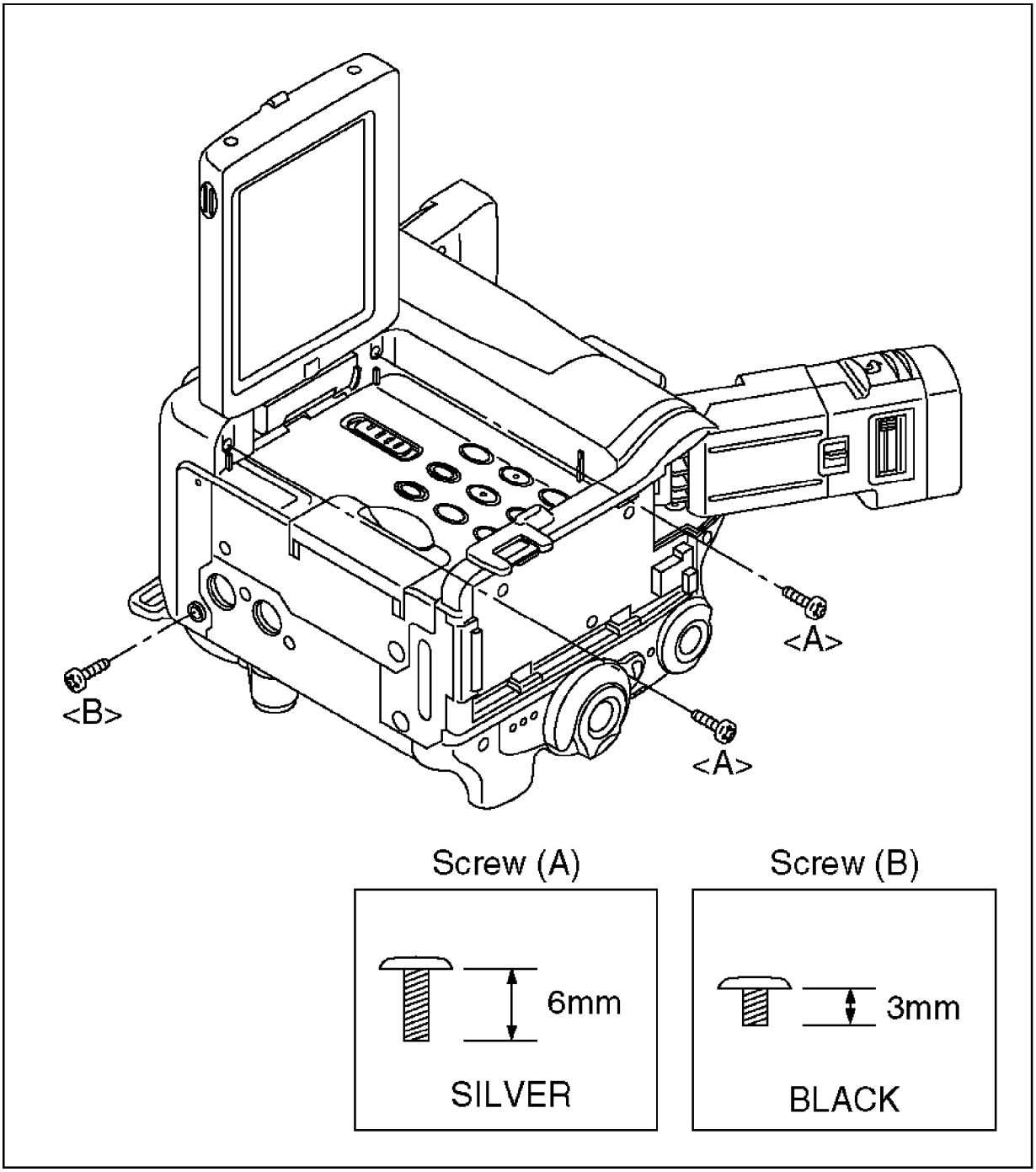


Fig. D3

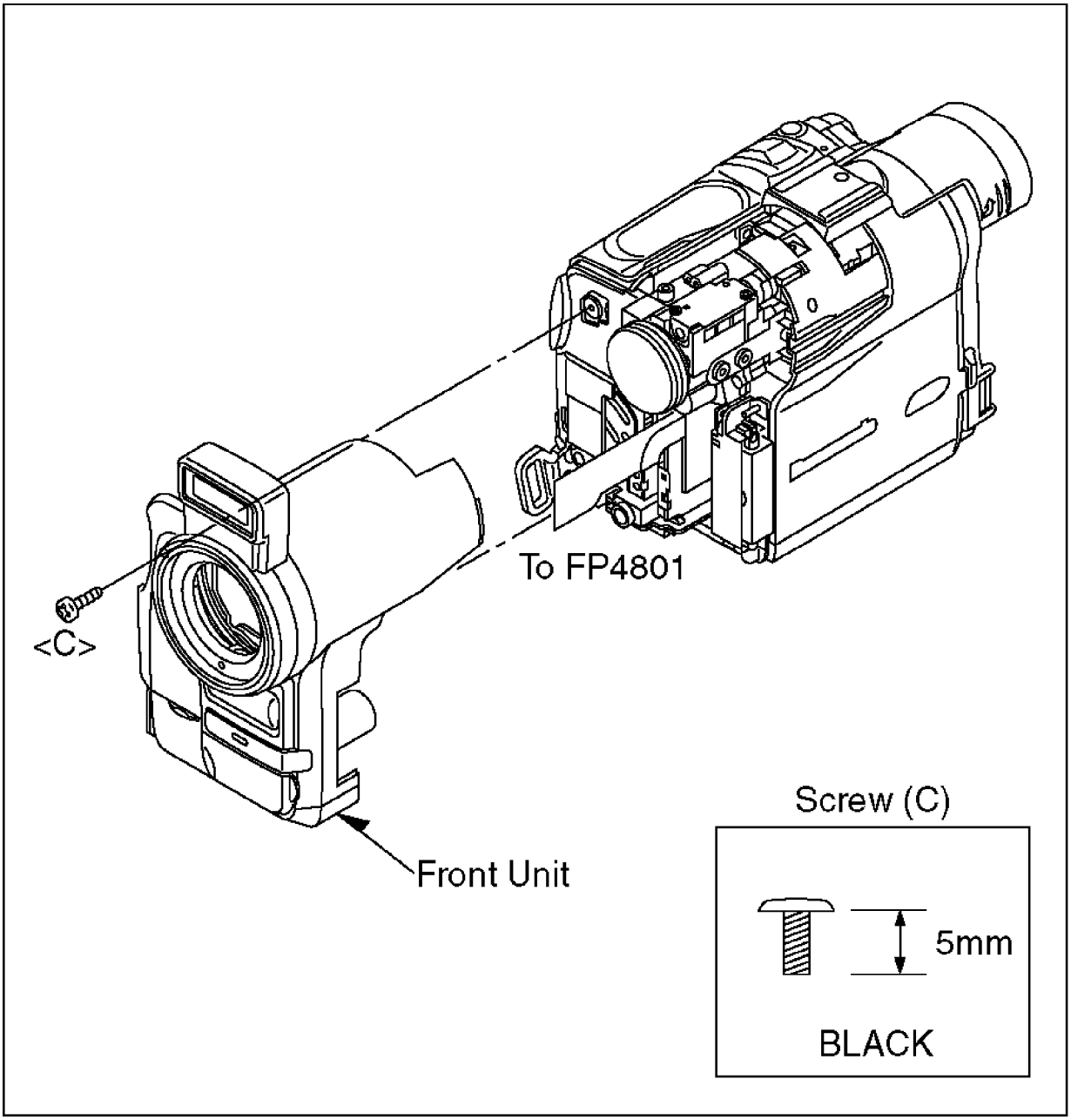


Fig. D4

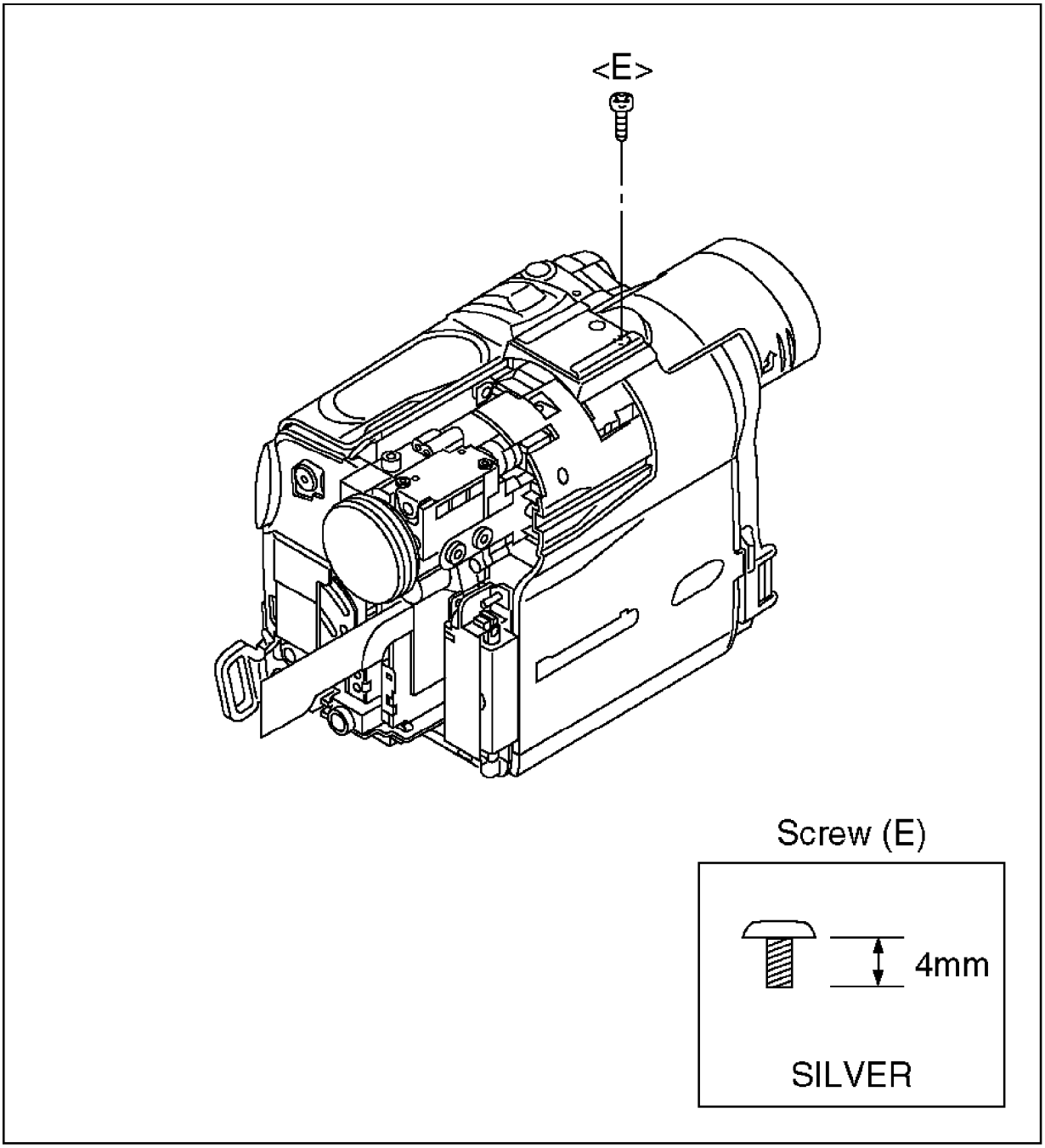


Fig. D5

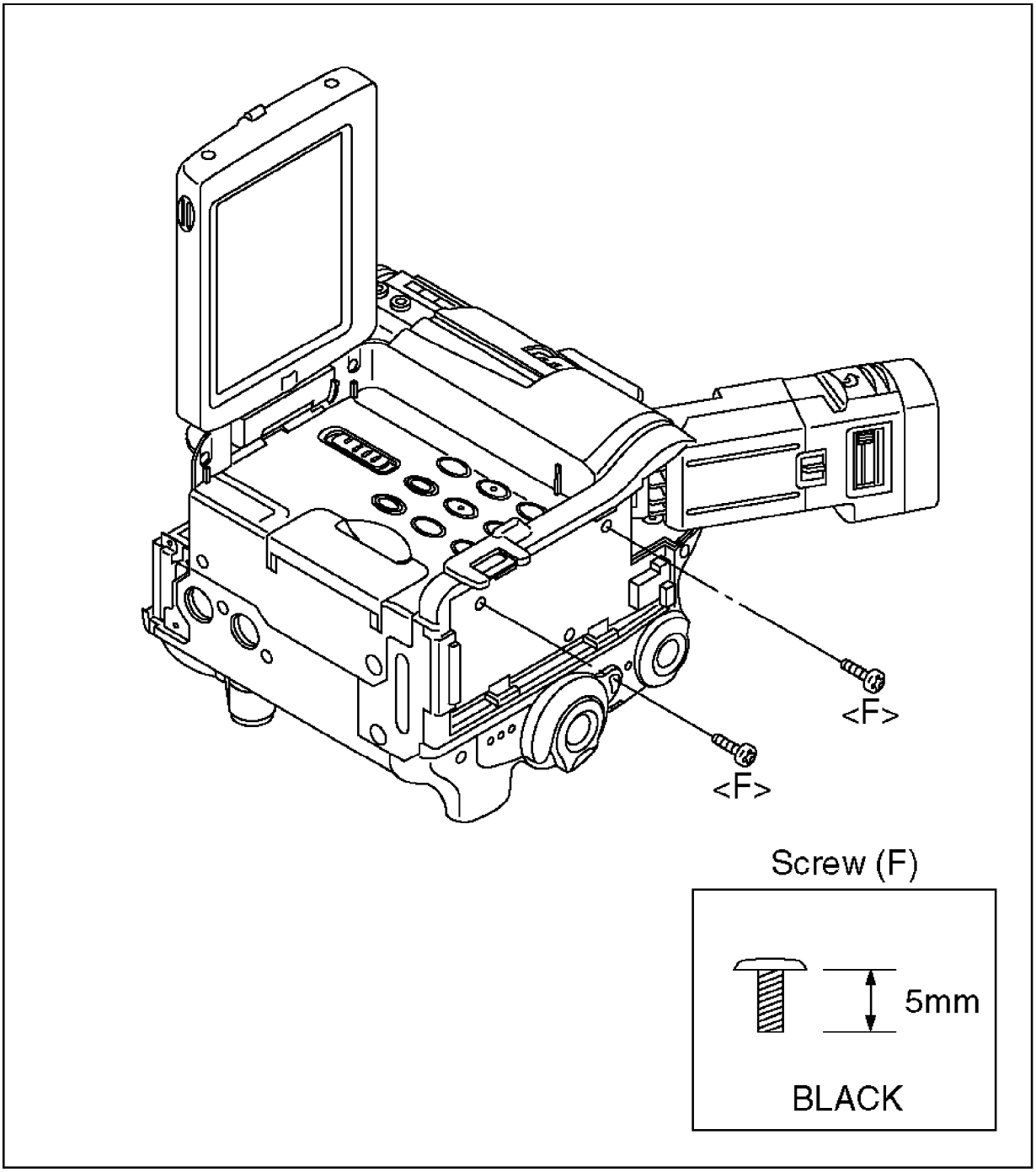
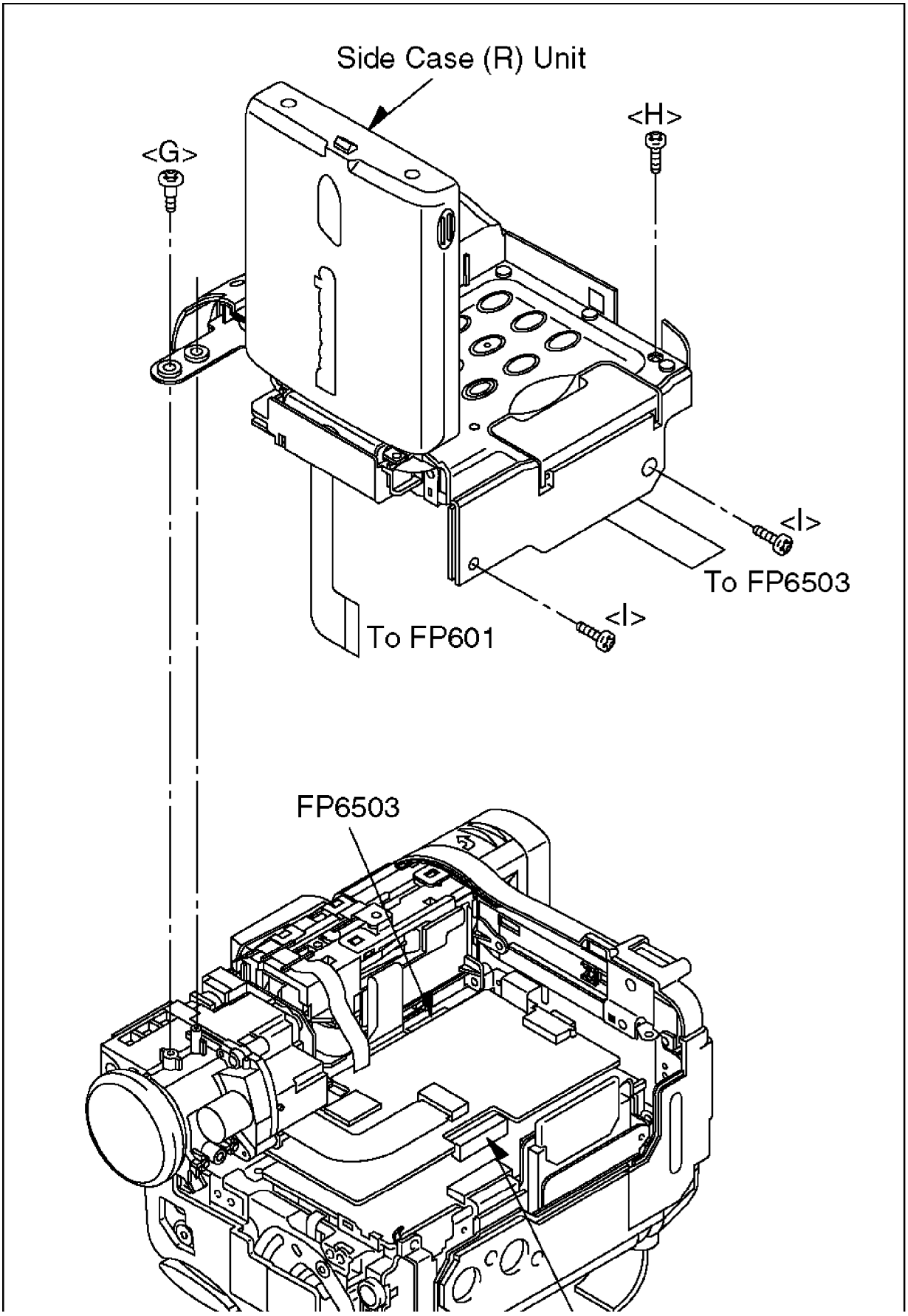


Fig. D6


Side Case (R) Unit
<H>
<G>
<I>
To FP6503
<I>
To FP601
FP6503

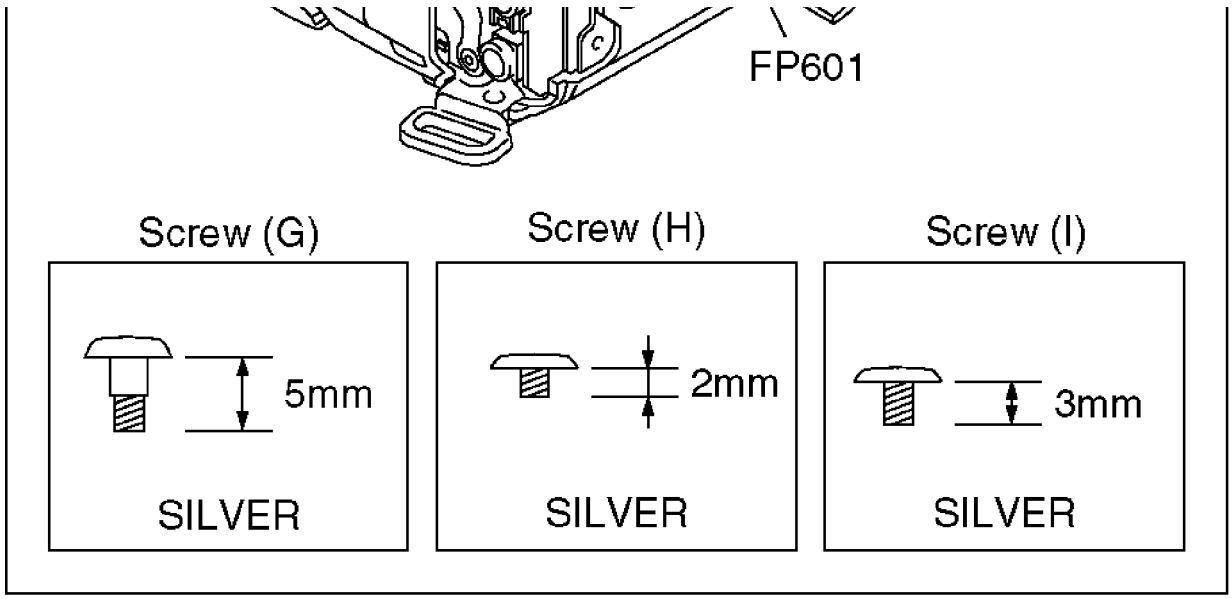

FP601
Screw (G)
5mm
SILVER
Screw (H)
2mm
SILVER
Screw (I)
3mm
SILVER

Fig. D7

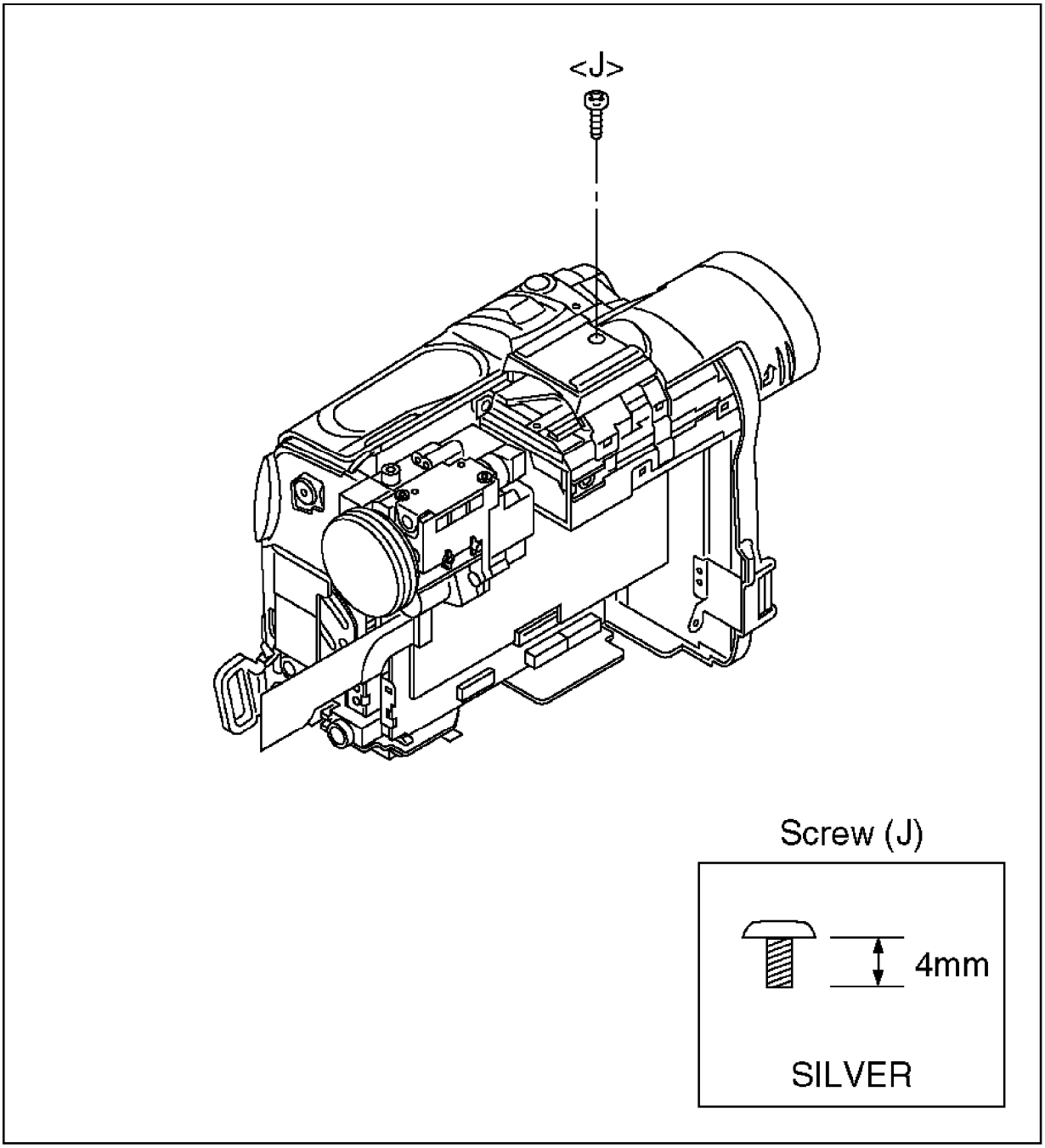


Fig. D8

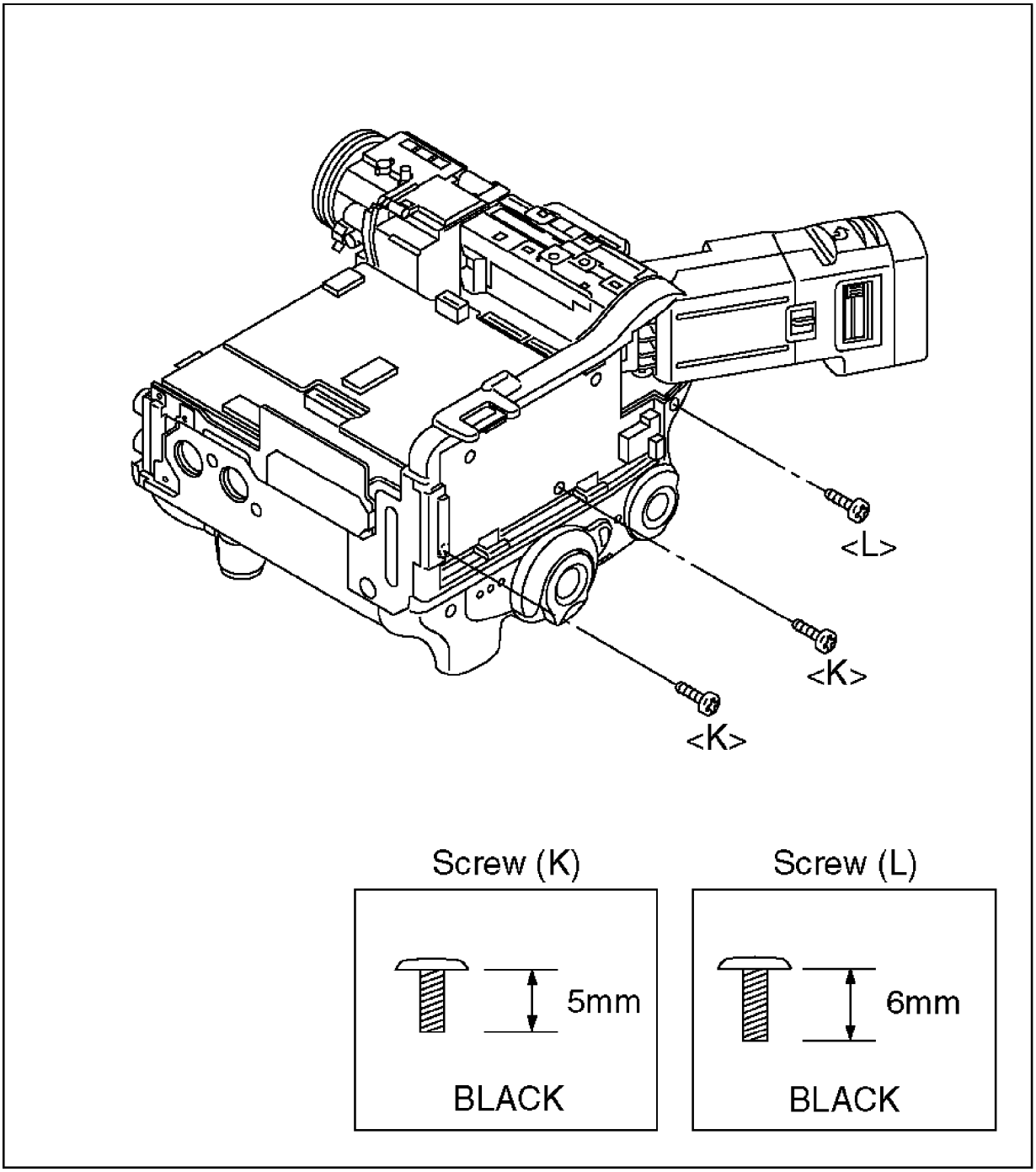


Fig. D9

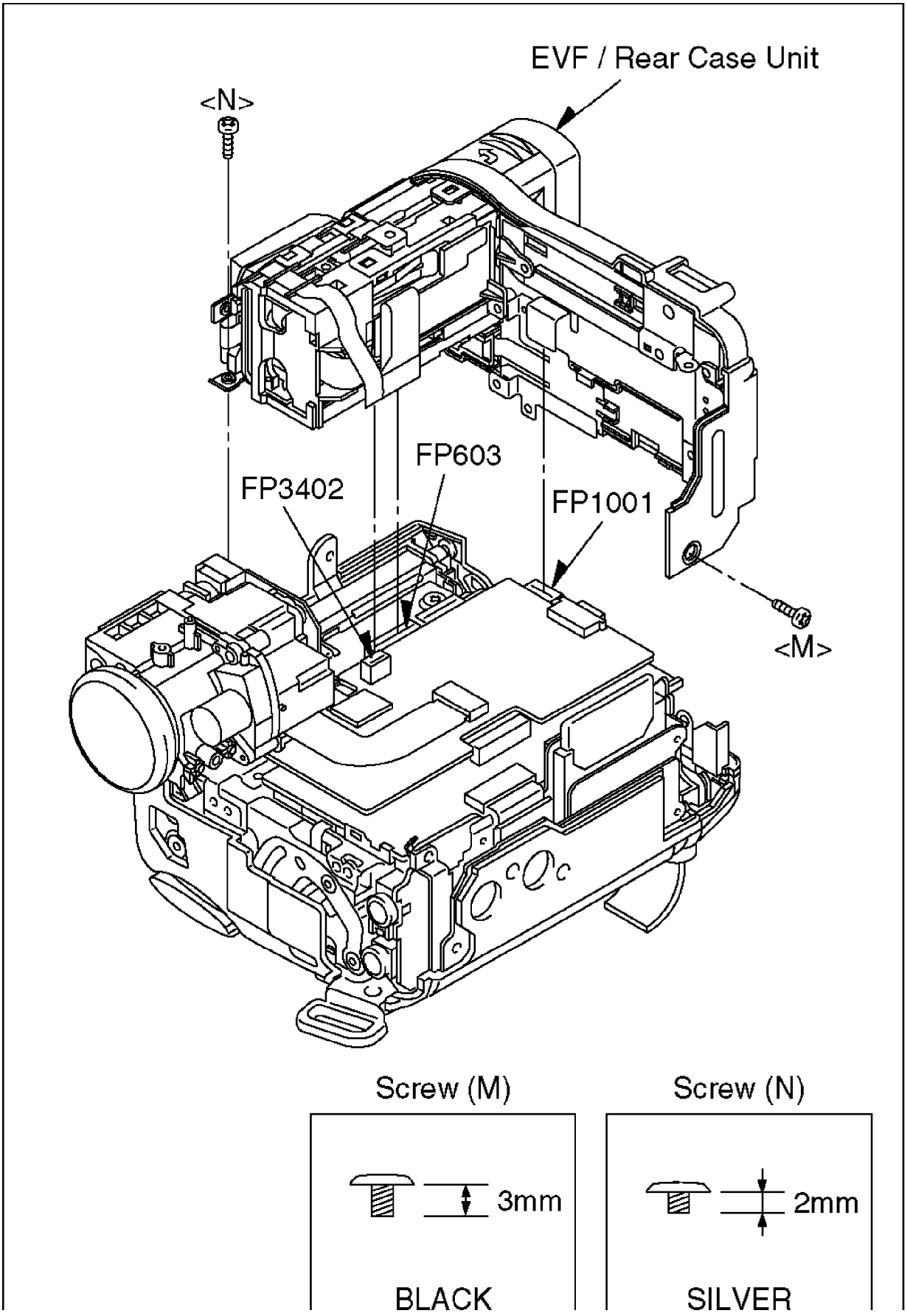
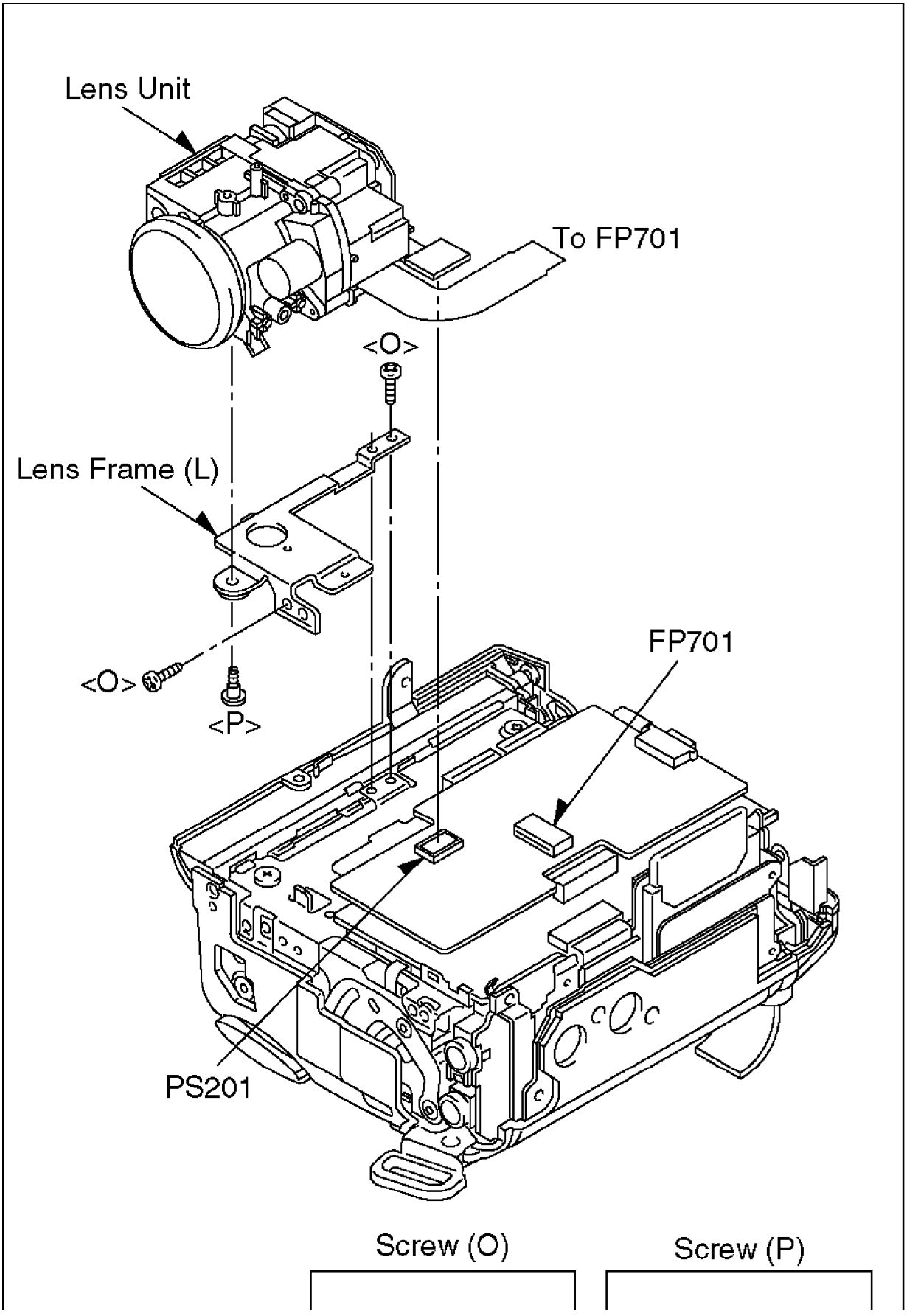

EVF / Rear Case Unit
<N>
FP603
FP3402
FP1001
<M>
Screw (M)
3mm
BLACK
Screw (N)
2mm
SILVER

Fig. D10


Lens Unit
To FP701
<O>
Lens Frame (L)
<O>
<P>
FP701
PS201
Screw (O)
Screw (P)

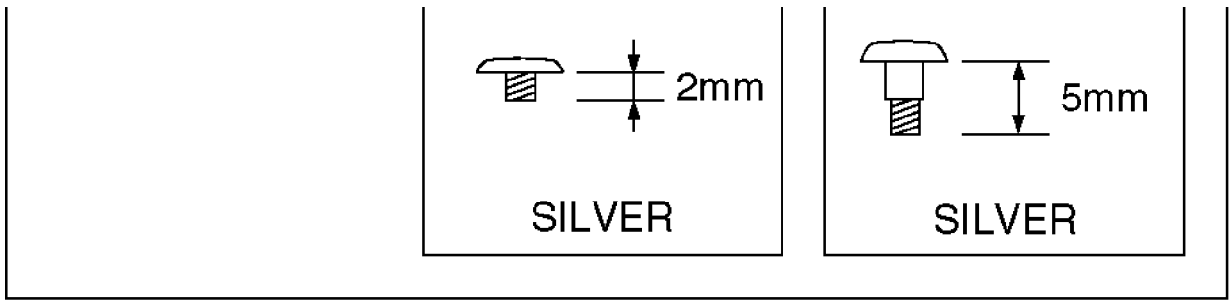


Fig. D11

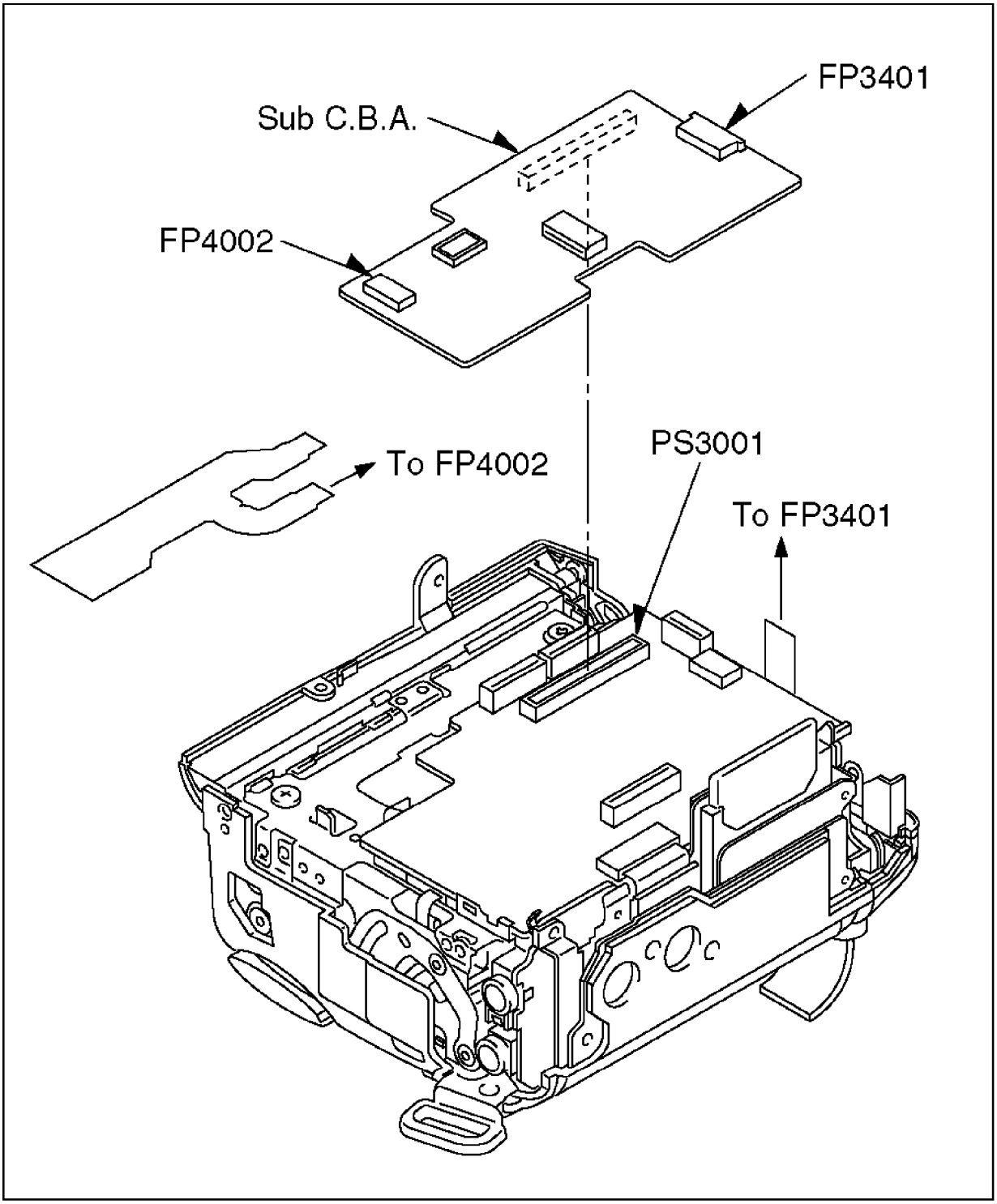


Fig. D12

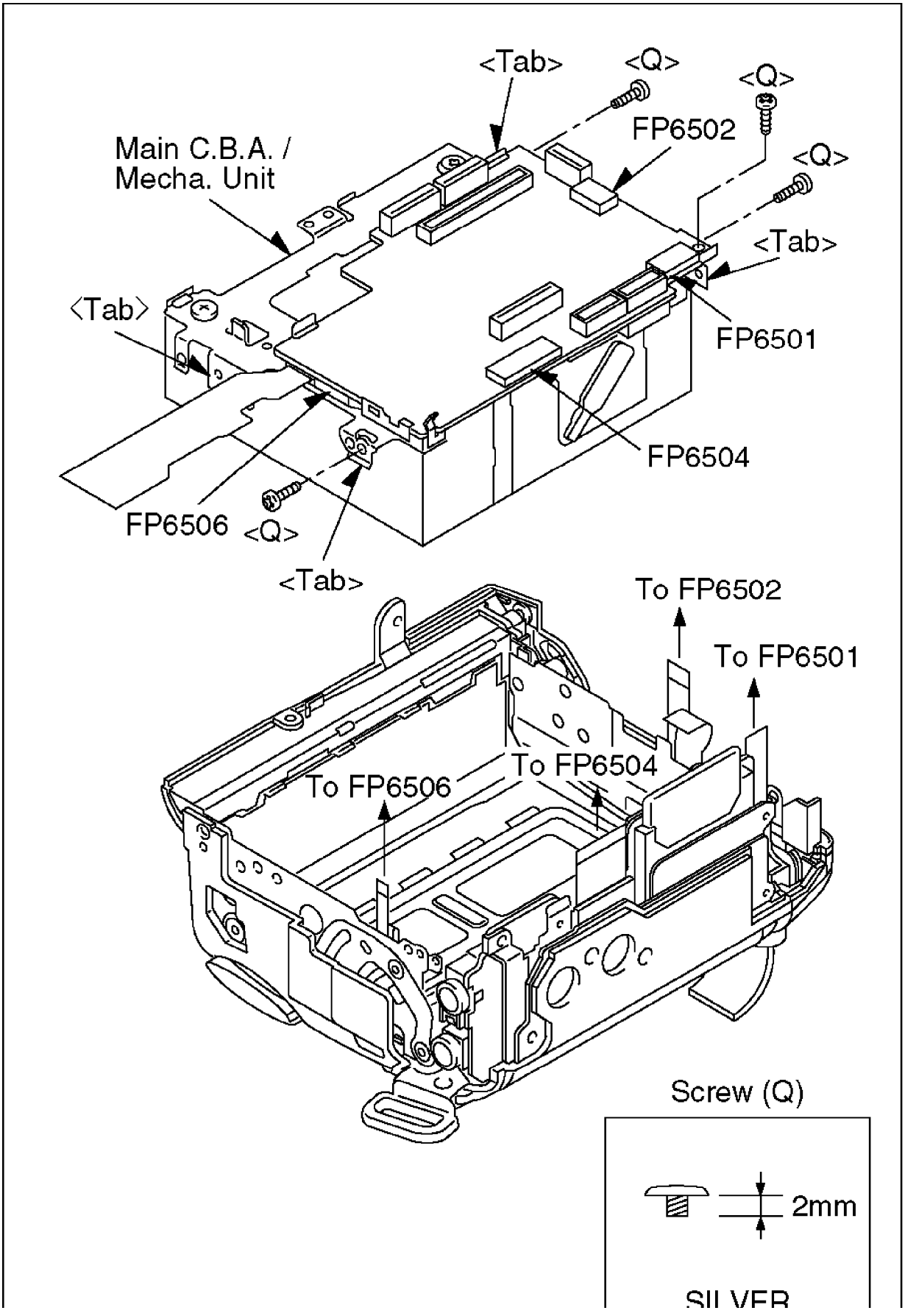
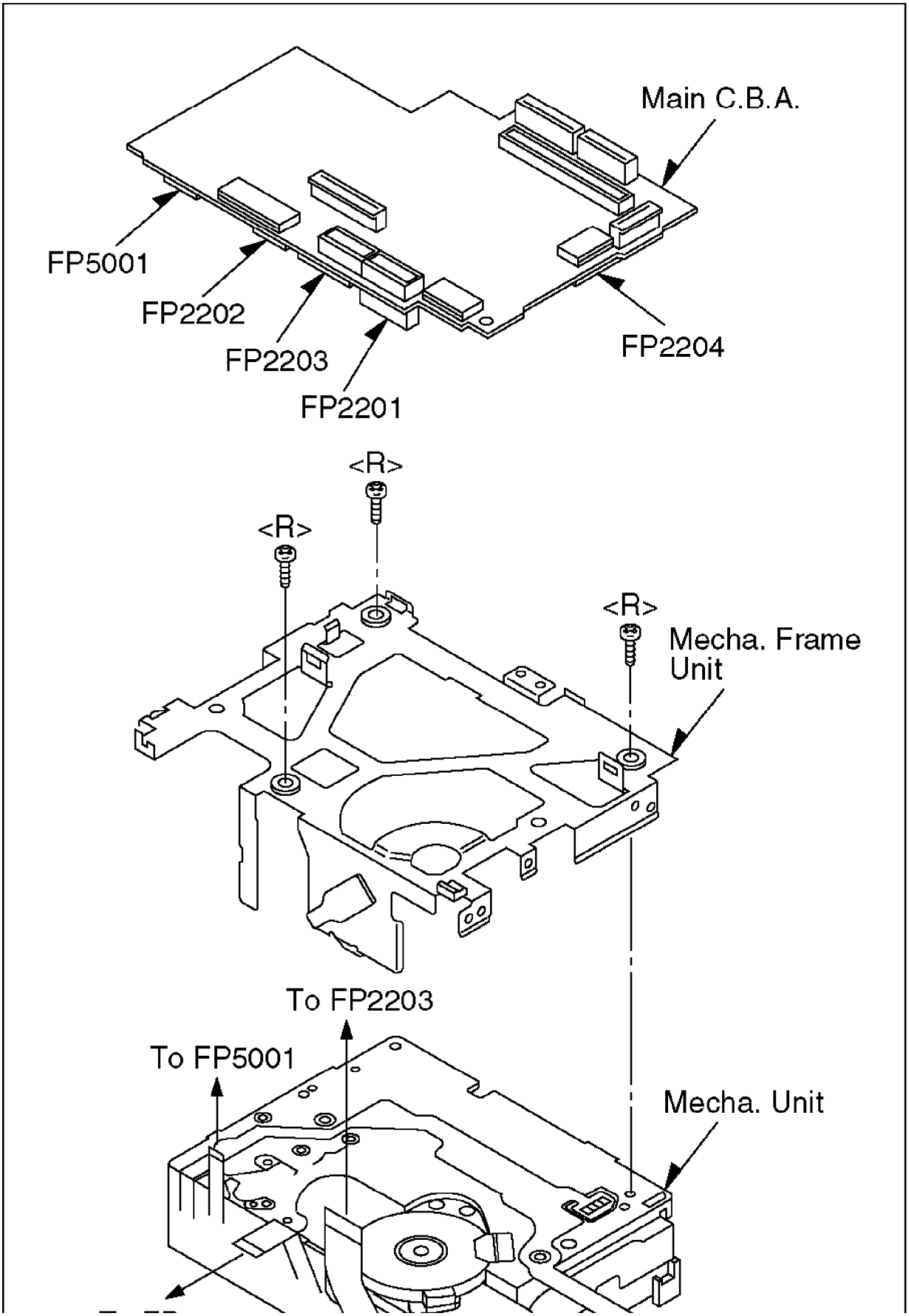

<Tab>
<Q>
<Q>
FP6502
Main C.B.A. /
Mecha. Unit
<Q>
<Tab>
<Tab>
FP6501
FP6504
FP6506
<Q>
<Tab>
To FP6502
To FP6501
To FP6504
To FP6506
Screw (Q)
2mm
SILVER

Fig. D13


Main C.B.A.
FP5001
FP2202
FP2203
FP2201
FP2204
<R>
<R>
<R>
Mecha. Frame Unit
To FP2203
To FP5001
Mecha. Unit

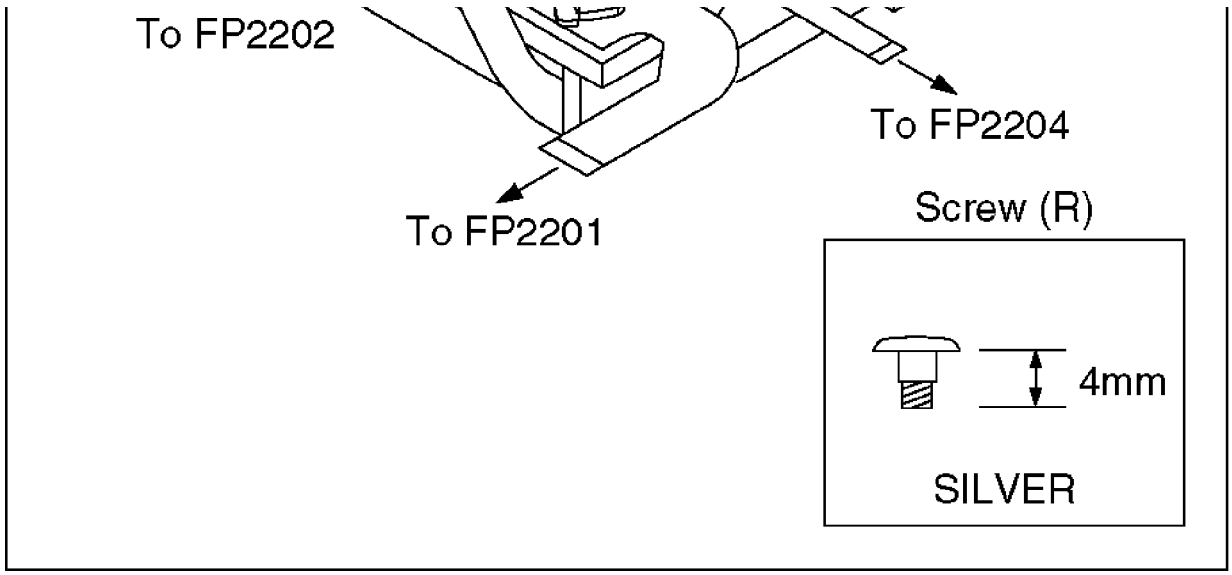


Fig. D14

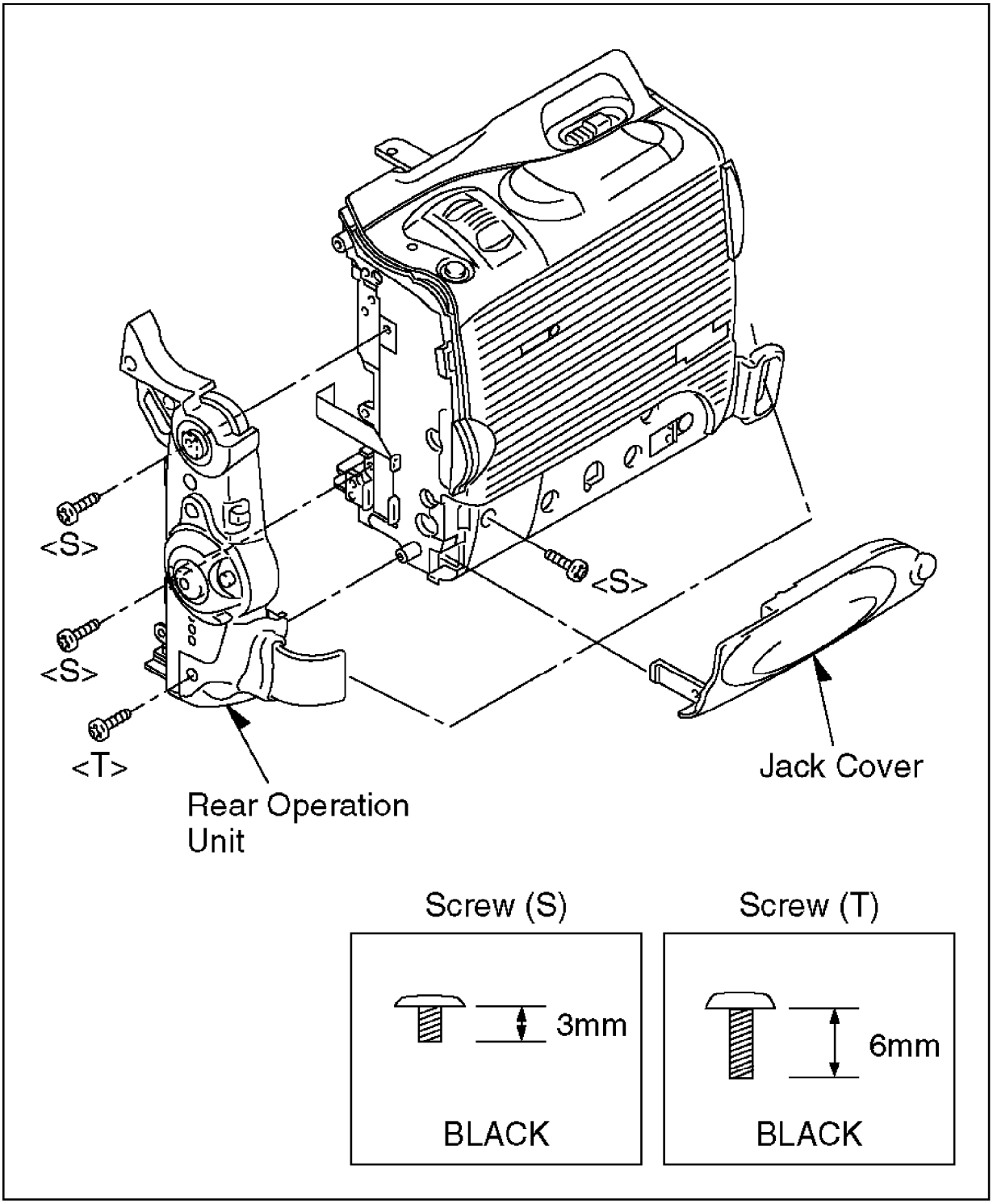

<S>
<S>
<T>
<S>
Rear Operation Unit
Jack Cover
Screw (S)
3mm
BLACK
Screw (T)
6mm
BLACK

Fig. D15

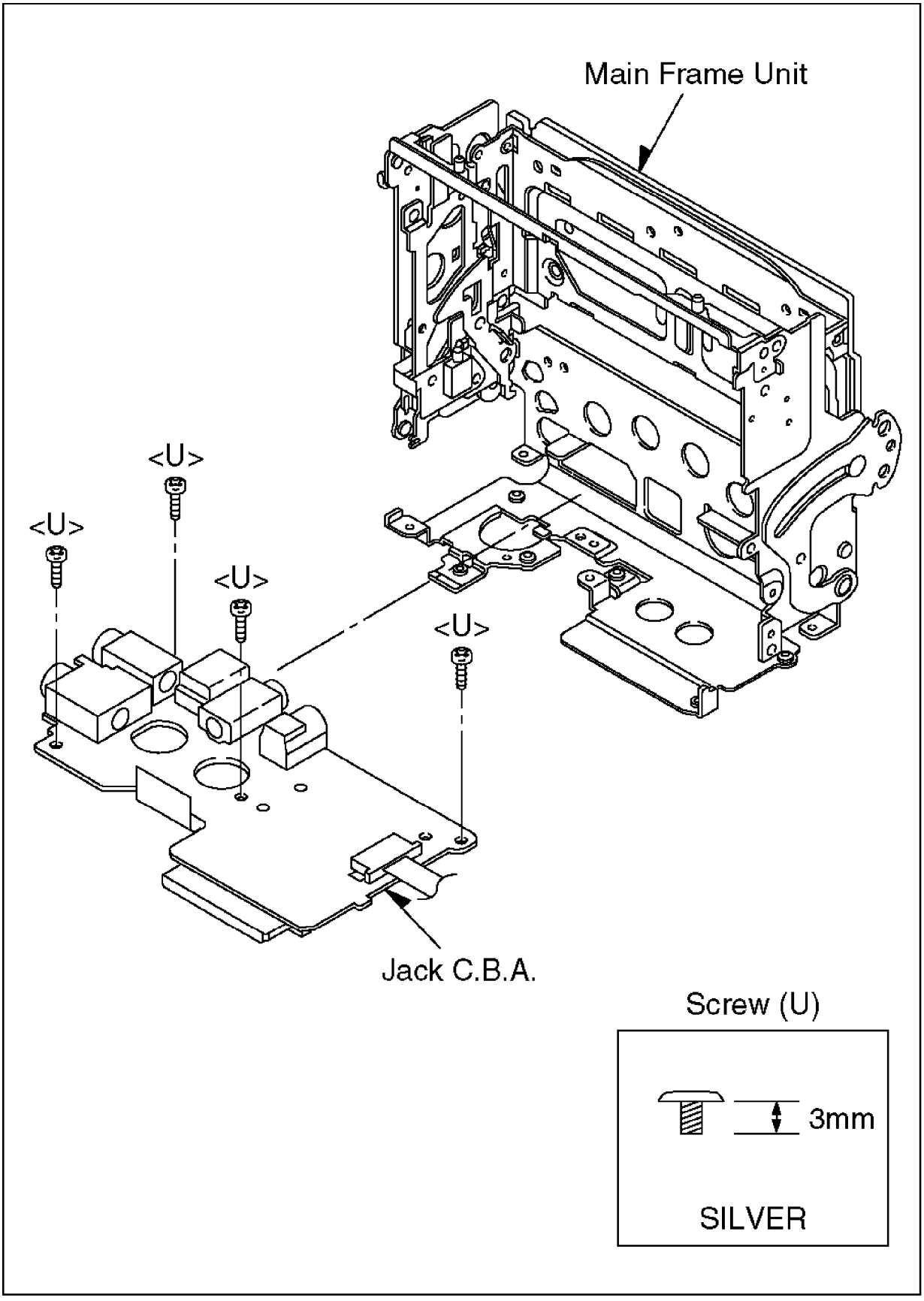

Main Frame Unit
<U>
<U>
<U>
<U>
Jack C.B.A.
Screw (U)
3mm
SILVER

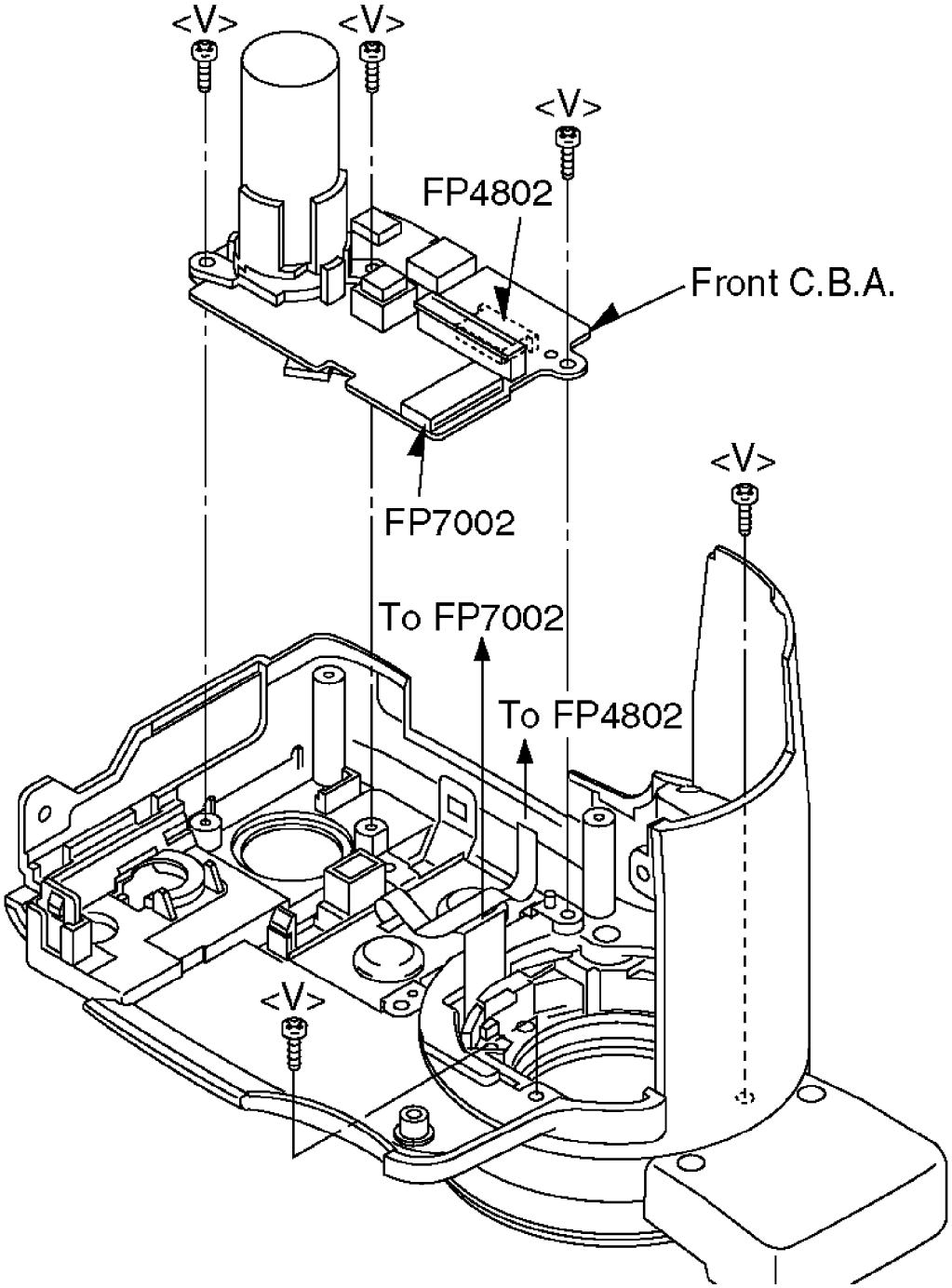
Fig. D16

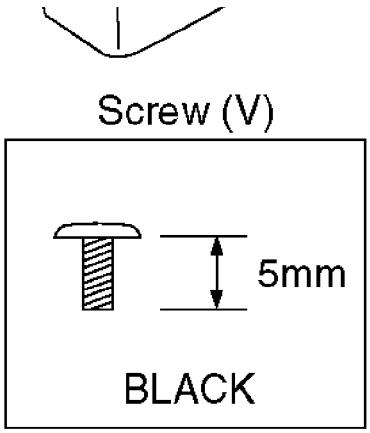
CAUTION

Be sure to discharge the capacitor on Front C.B.A. before disassembling.

CAUTION

Be careful of the high voltage circuit on Front C.B.A. when servicing.





Method:
1.Prepare the 2 Resistors
(ERG2SJ221:220 ohm/2w)
for discharge.
Note:
Above 2 Resistors may be
substituted with equivalent type.
2.Make short circuit using
2 Resisters between C7004(+) and
C7004(-) for 3 seconds as follows.
3.After discharging, confirm that the
capacitor voltage is sufficiently
lowered using a voltmeter.

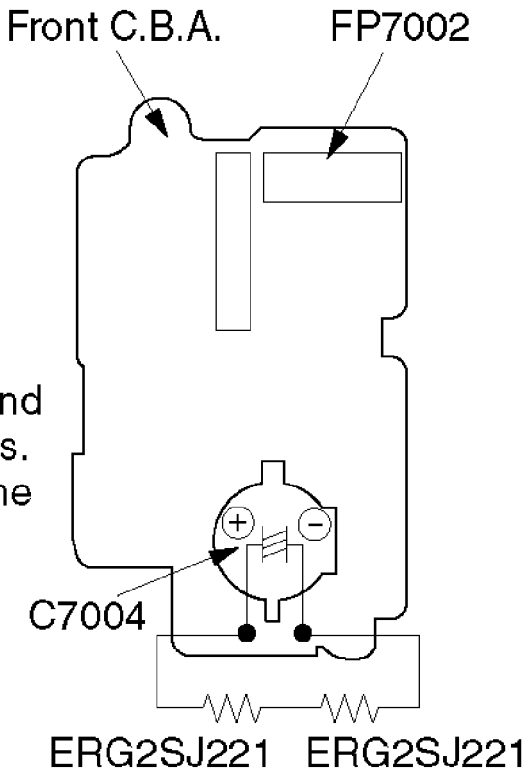


Fig. D17

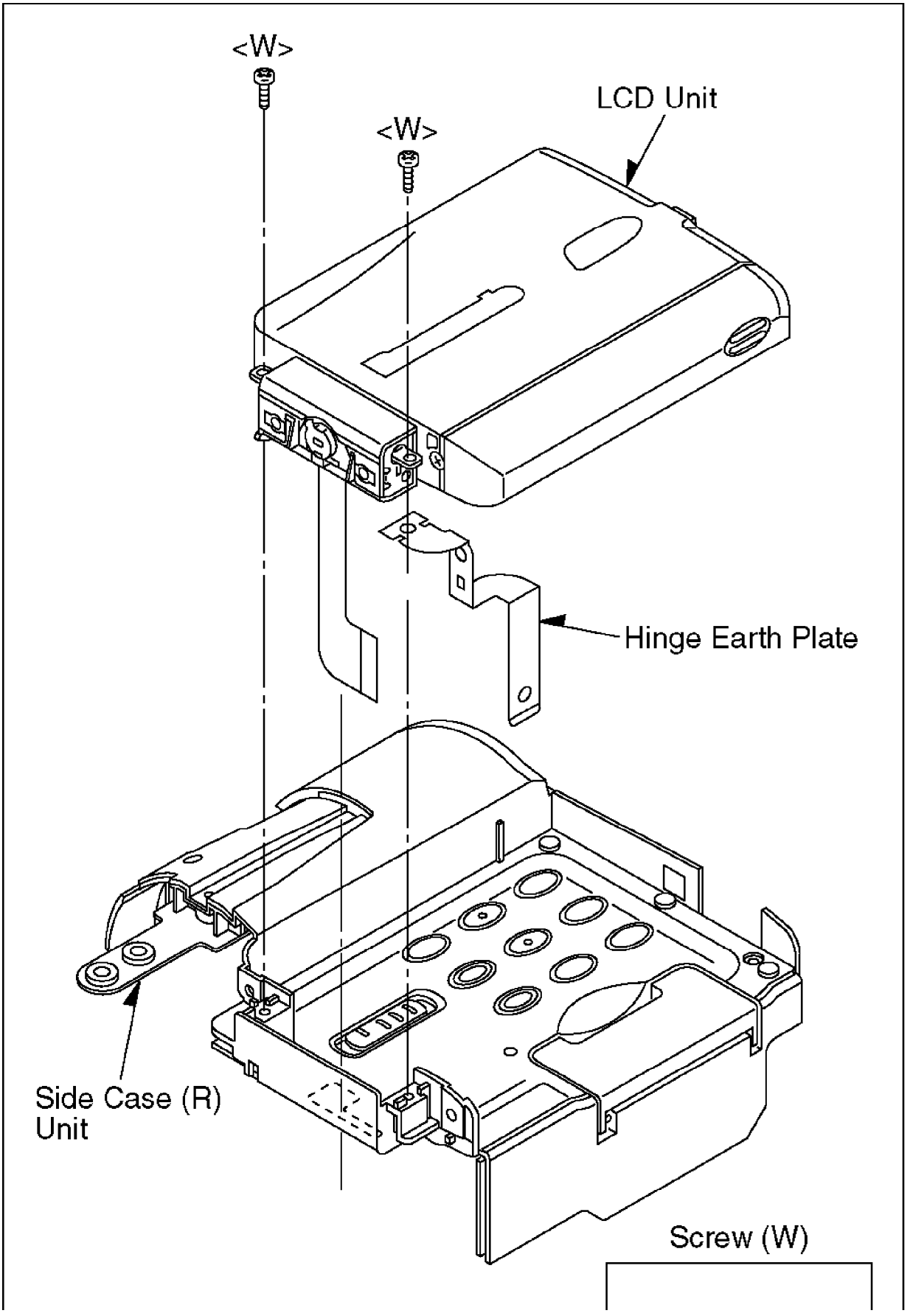

<W>
<W>
LCD Unit
Hinge Earth Plate
Side Case (R)
Unit
Screw (W)

Fig. D18

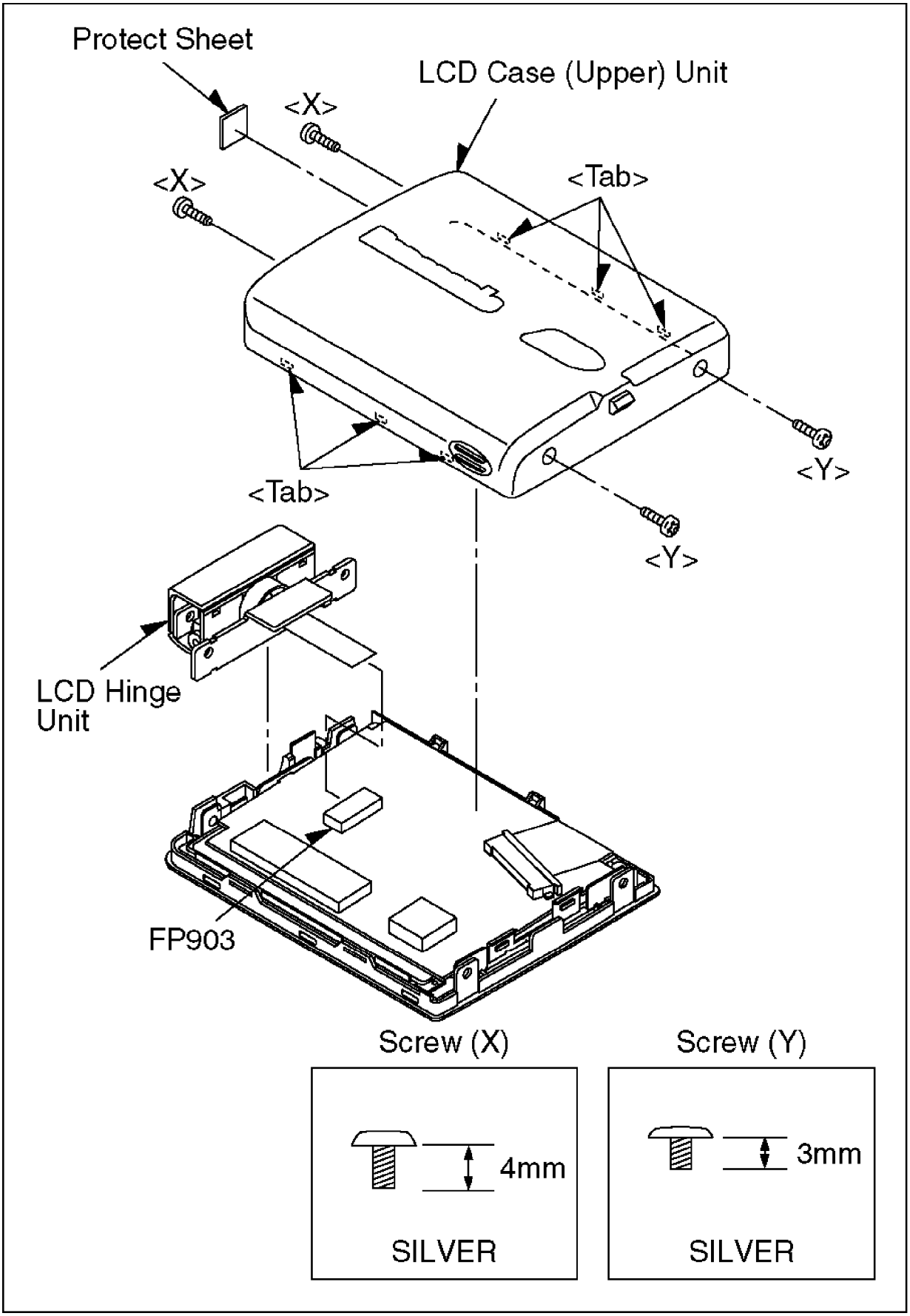

Protect Sheet
LCD Case (Upper) Unit
<X>
<X>
<Tab>
<Tab>
<Y>
<Y>
LCD Hinge Unit
FP903
Screw (X)
4mm
SILVER
Screw (Y)
3mm
SILVER

Fig. D19

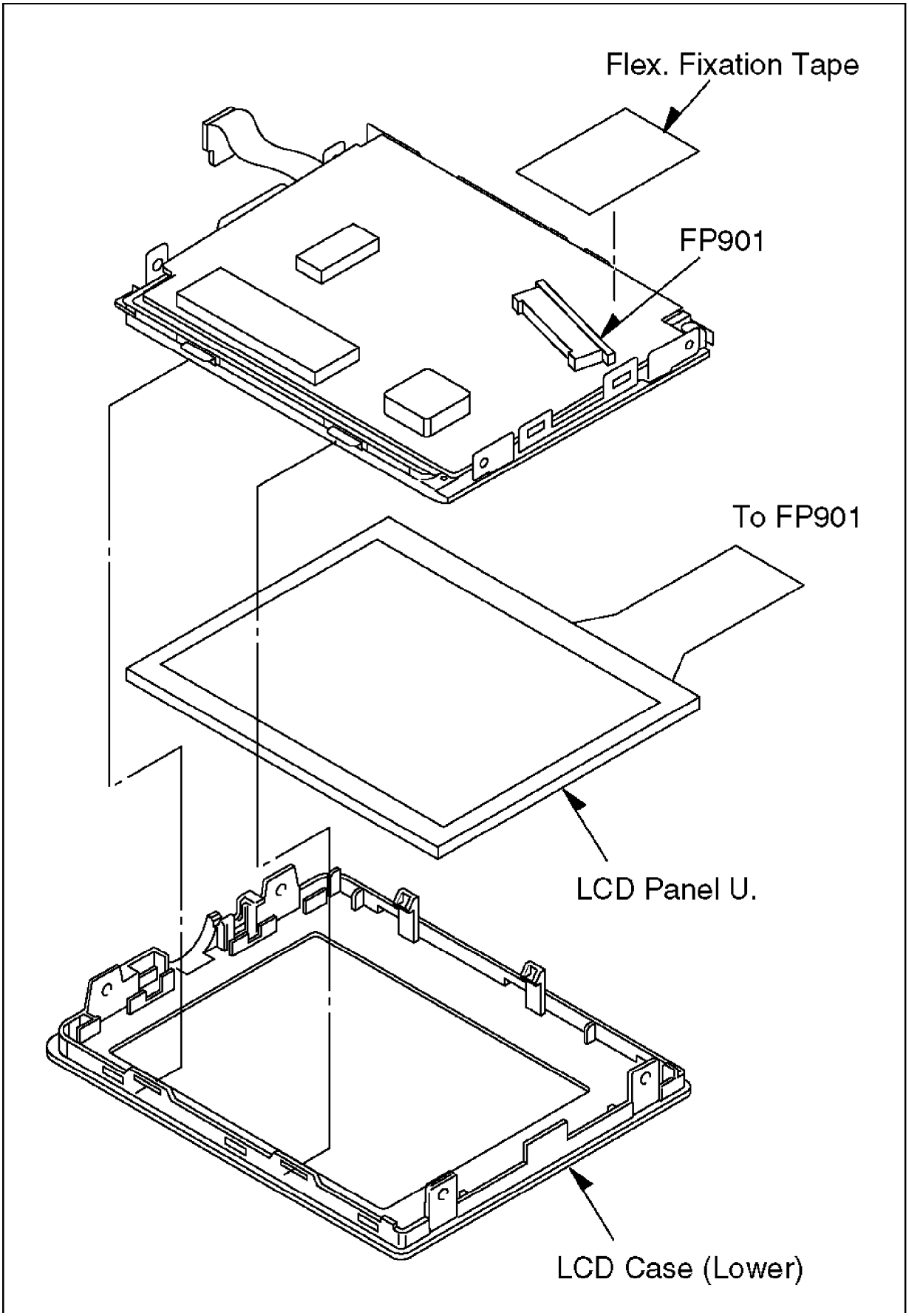
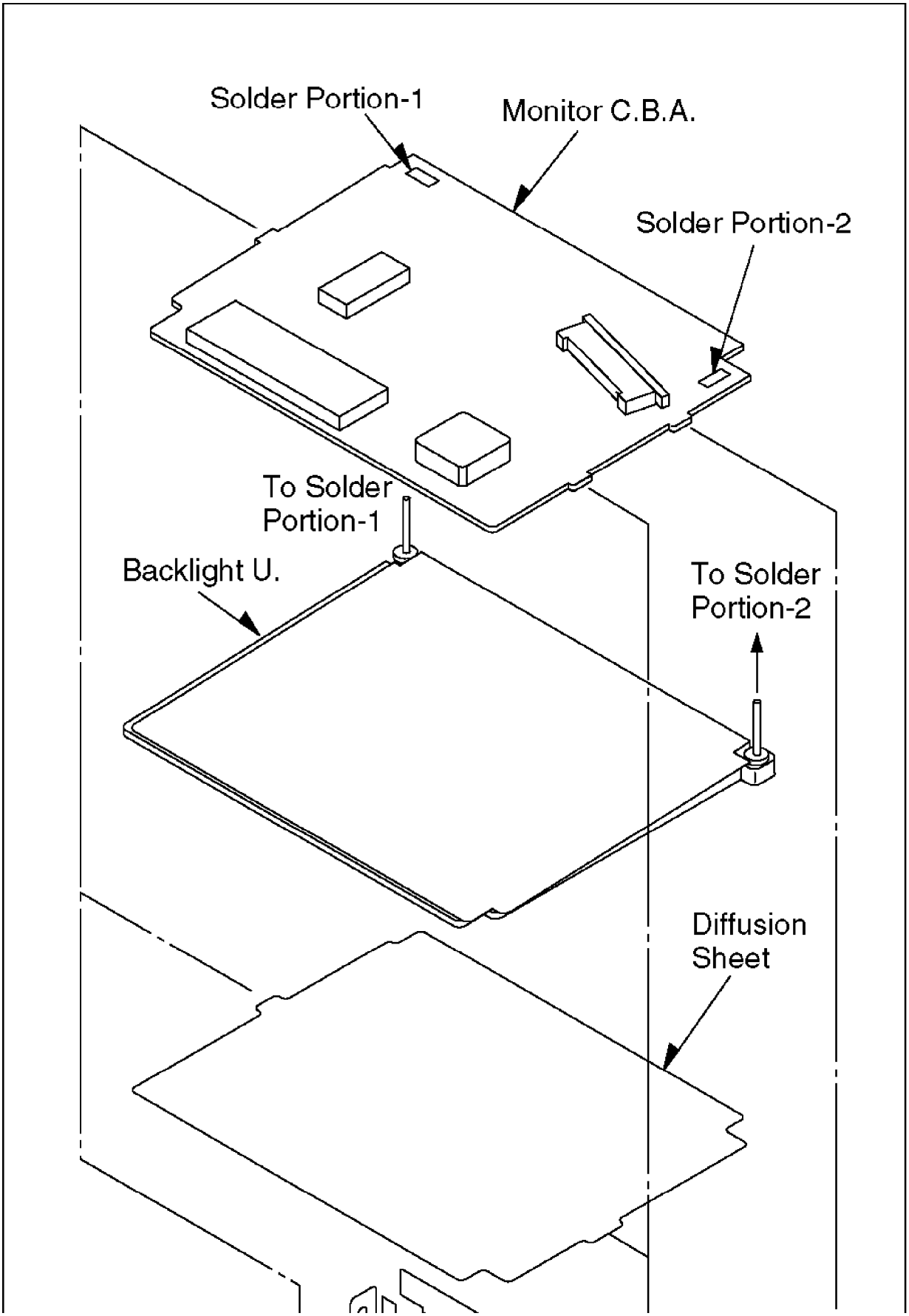

Flex. Fixation Tape
FP901
To FP901
LCD Panel U.
LCD Case (Lower)

Fig. D20


Solder Portion-1
Monitor C.B.A.
Solder Portion-2
To Solder
Portion-1
Backlight U.
To Solder
Portion-2
Diffusion
Sheet

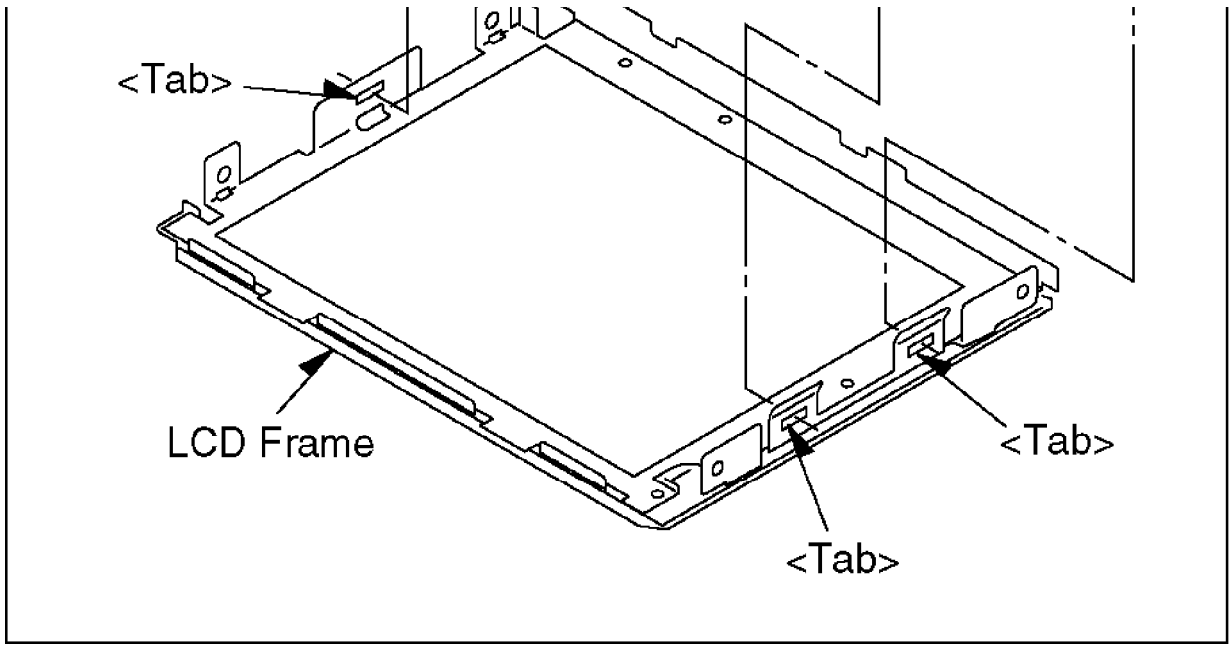


Fig. D21

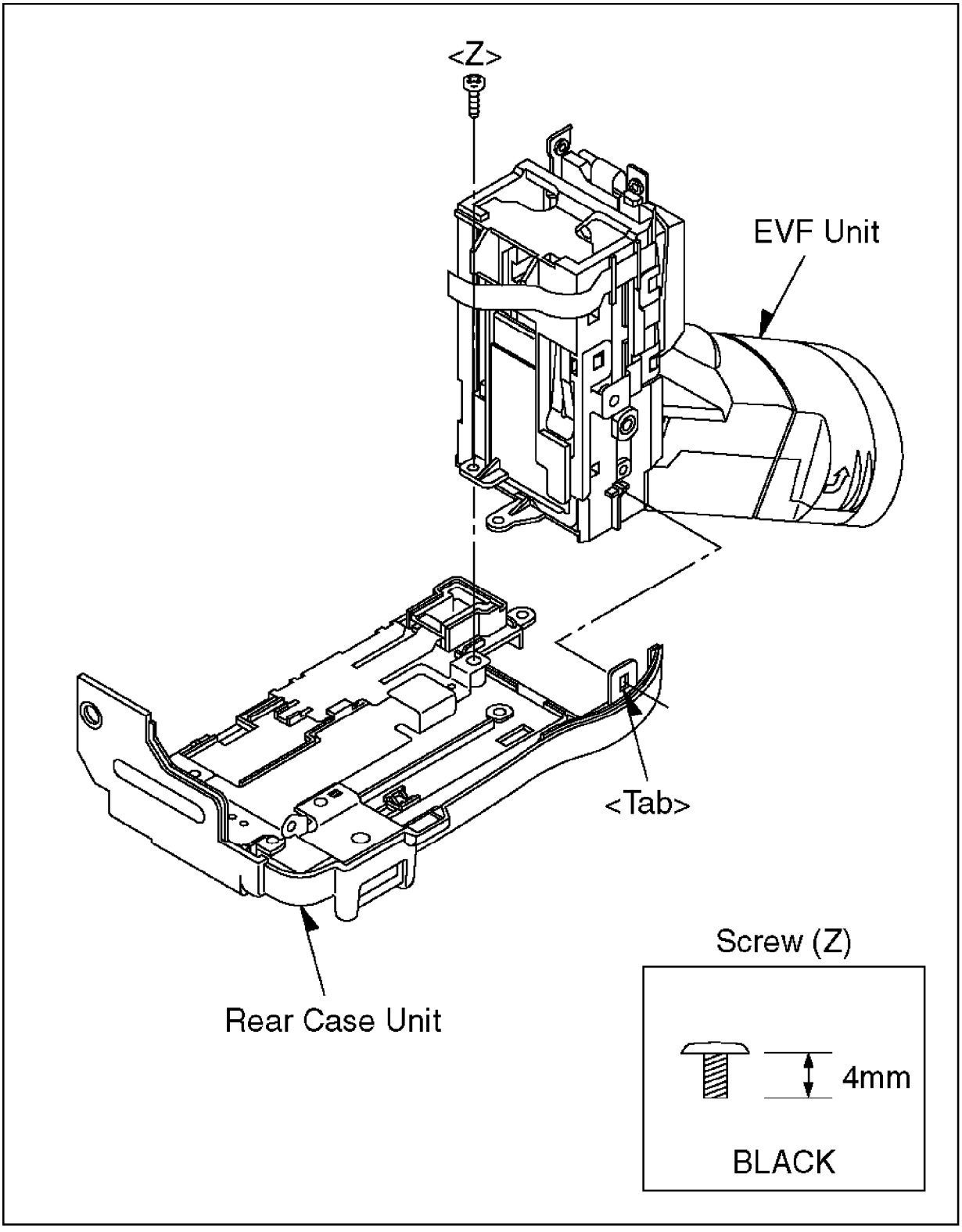


Fig. D22

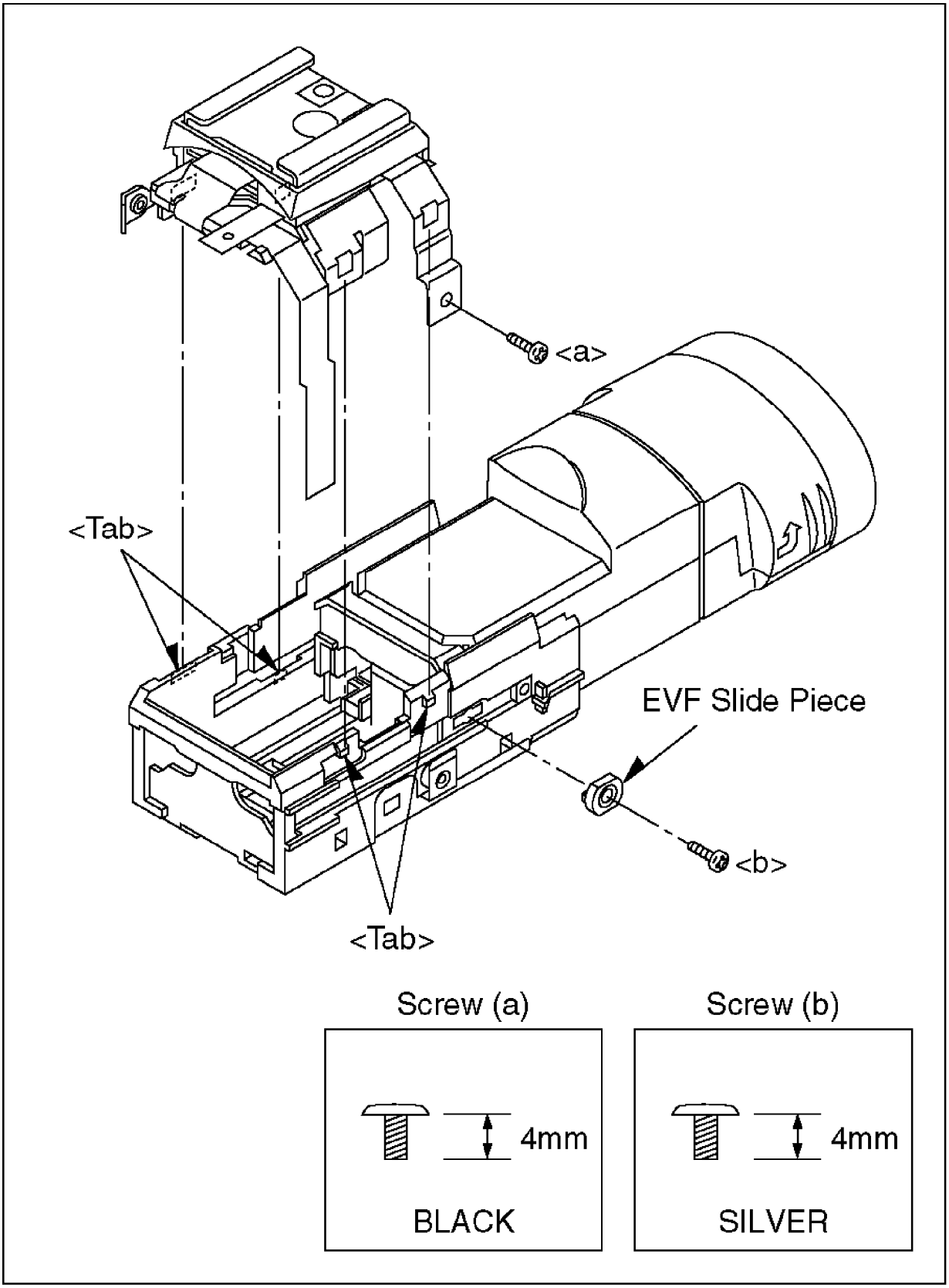
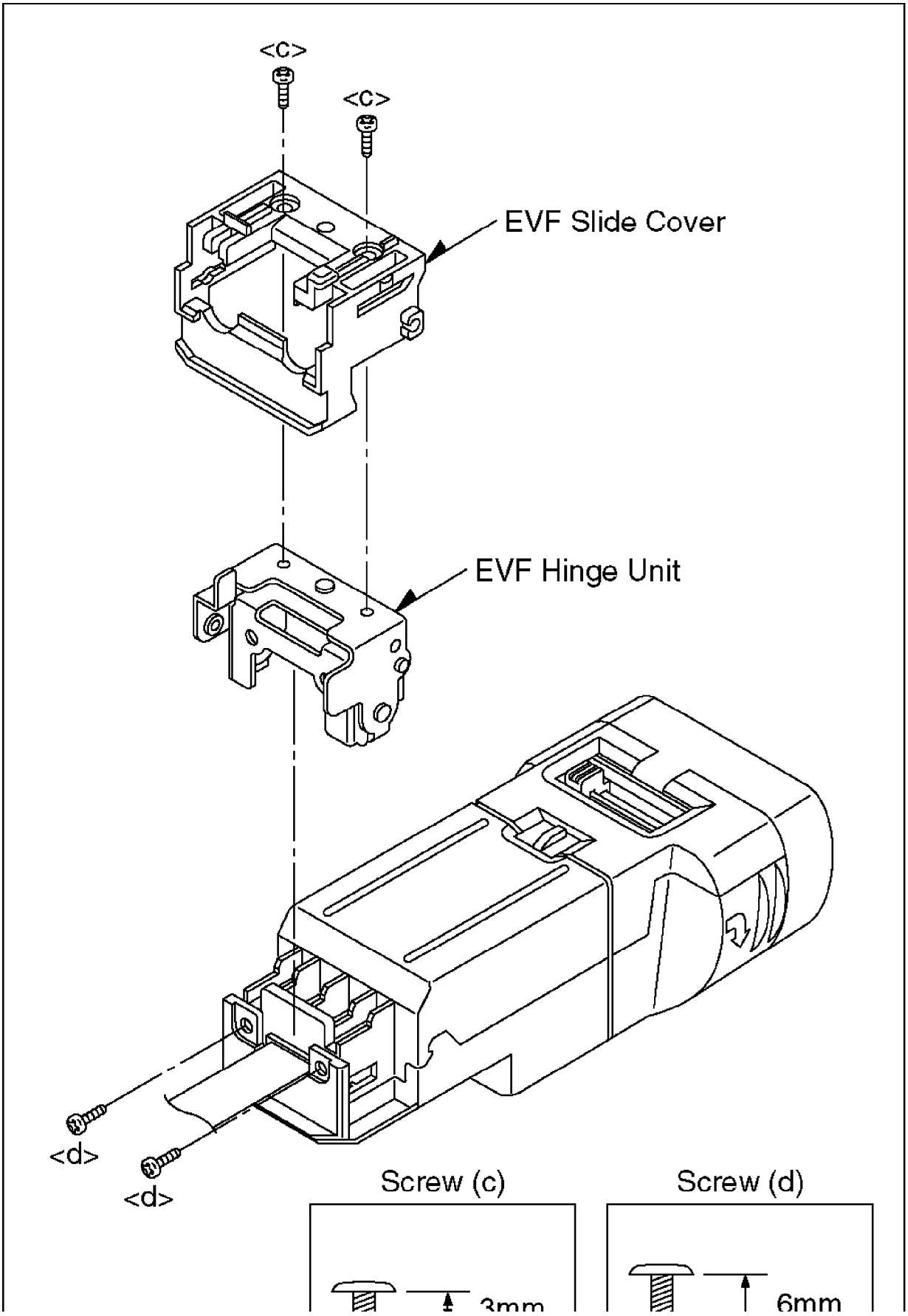

<a>
<Tab>
EVF Slide Piece
<b>
<Tab>
Screw (a)
Screw (b)
4mm
4mm
BLACK
SILVER

Fig. D23


<c>
<c>
EVF Slide Cover
EVF Hinge Unit
<d>
<d>
Screw (c)
Screw (d)
3mm
6mm

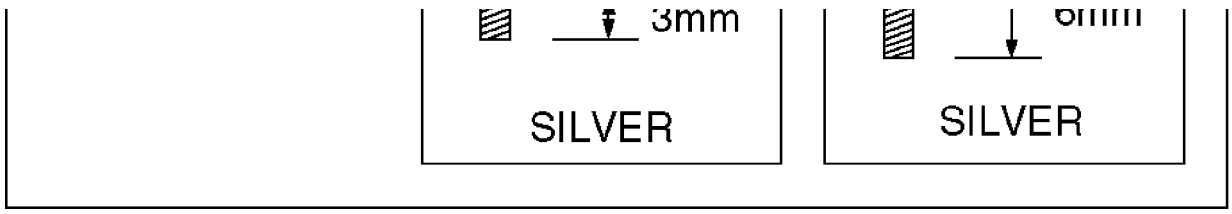


Fig. D24

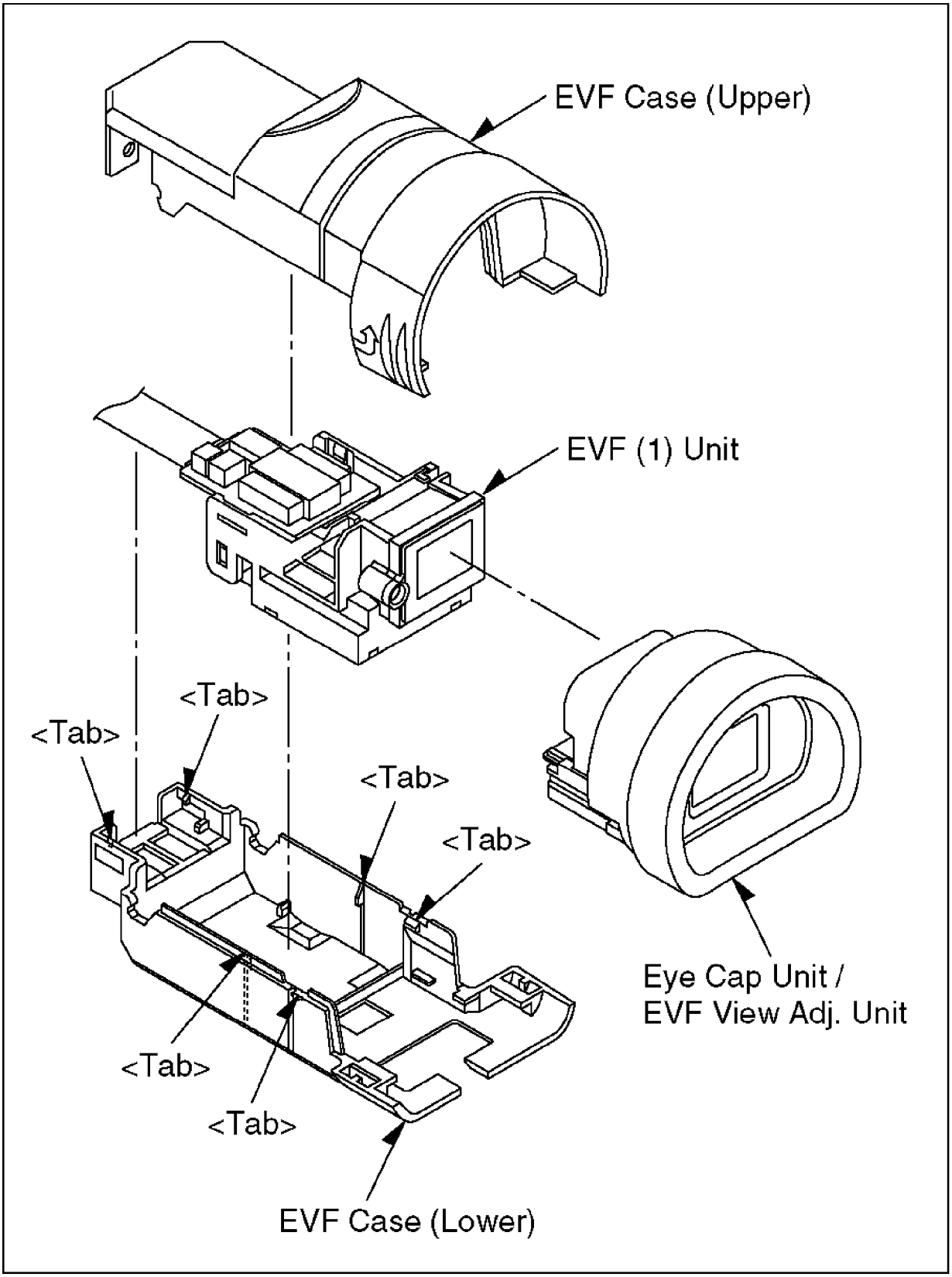
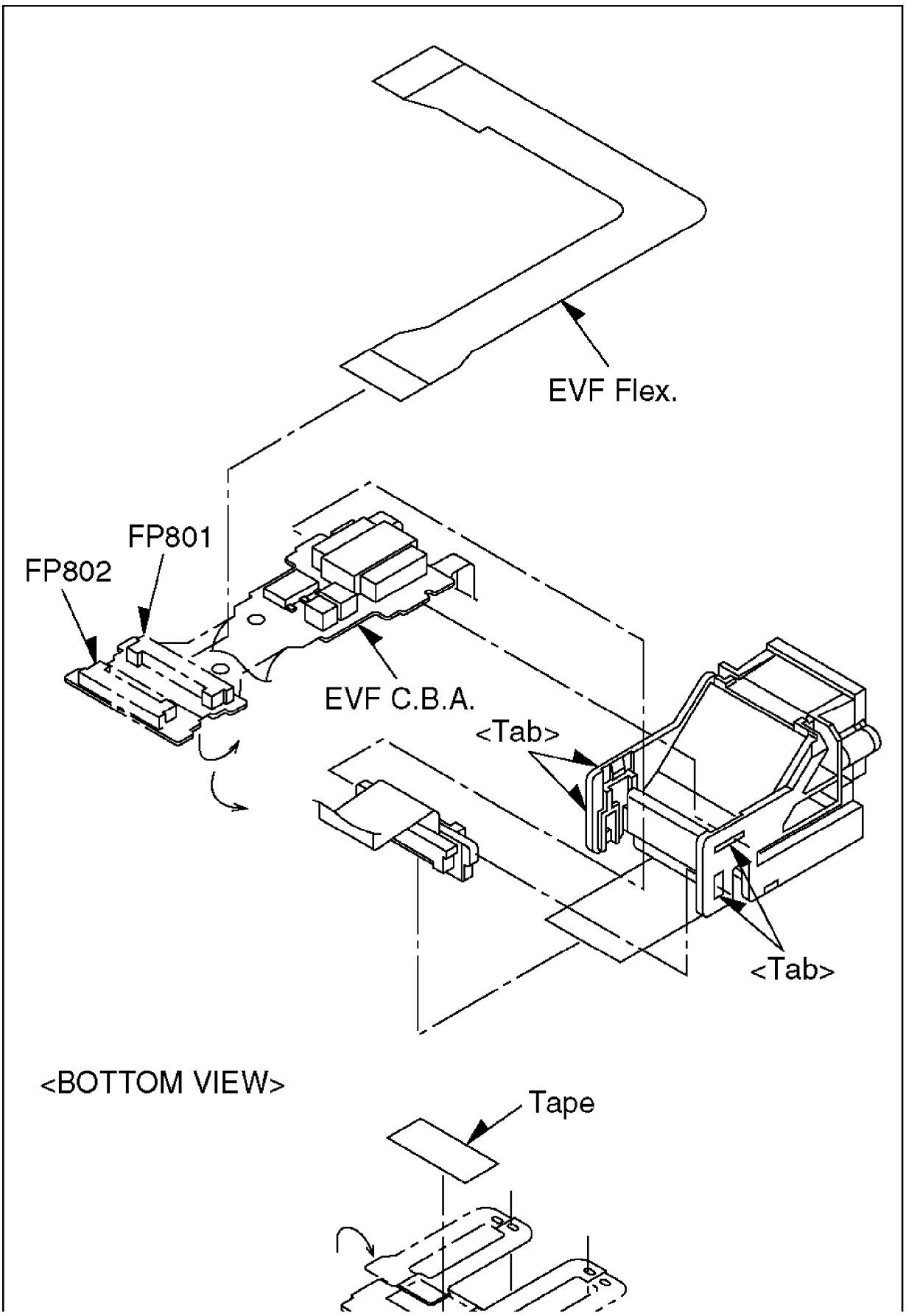
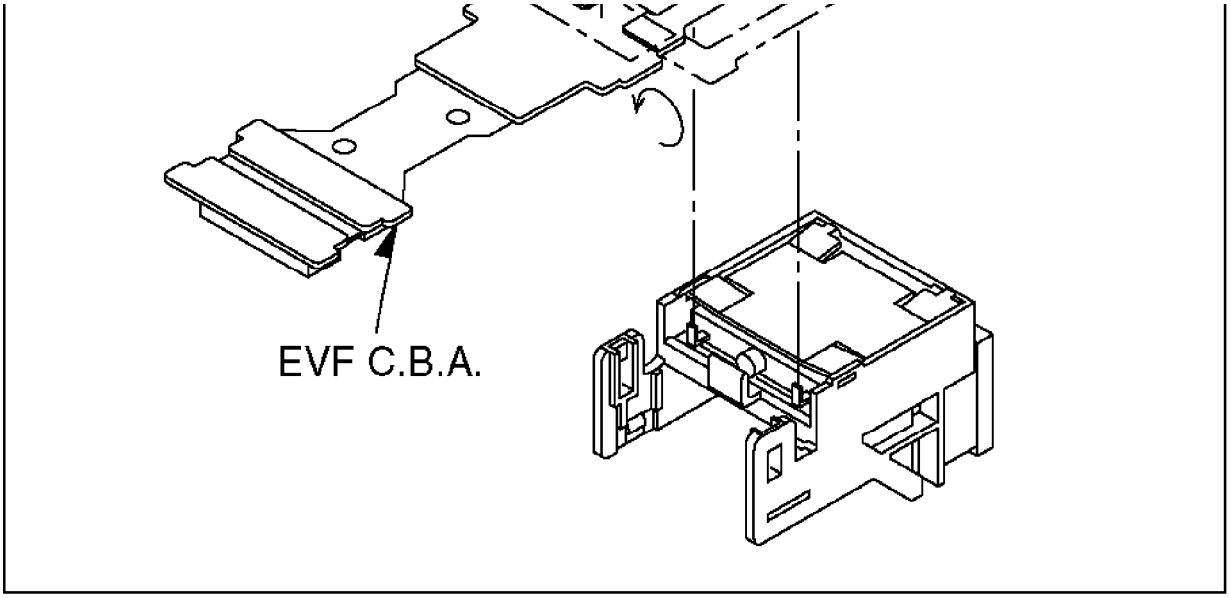

EVF Case (Upper)
EVF (1) Unit
<Tab>
<Tab>
<Tab>
<Tab>
<Tab>
<Tab>
Eye Cap Unit /
EVF View Adj. Unit
EVF Case (Lower)

Fig. D25


EVF Flex.
FP801
FP802
EVF C.B.A.
<Tab>
<Tab>
<BOTTOM VIEW>
Tape



8.3. DISASSEMBLY PROCEDURES OF CAMERA LENS UNIT

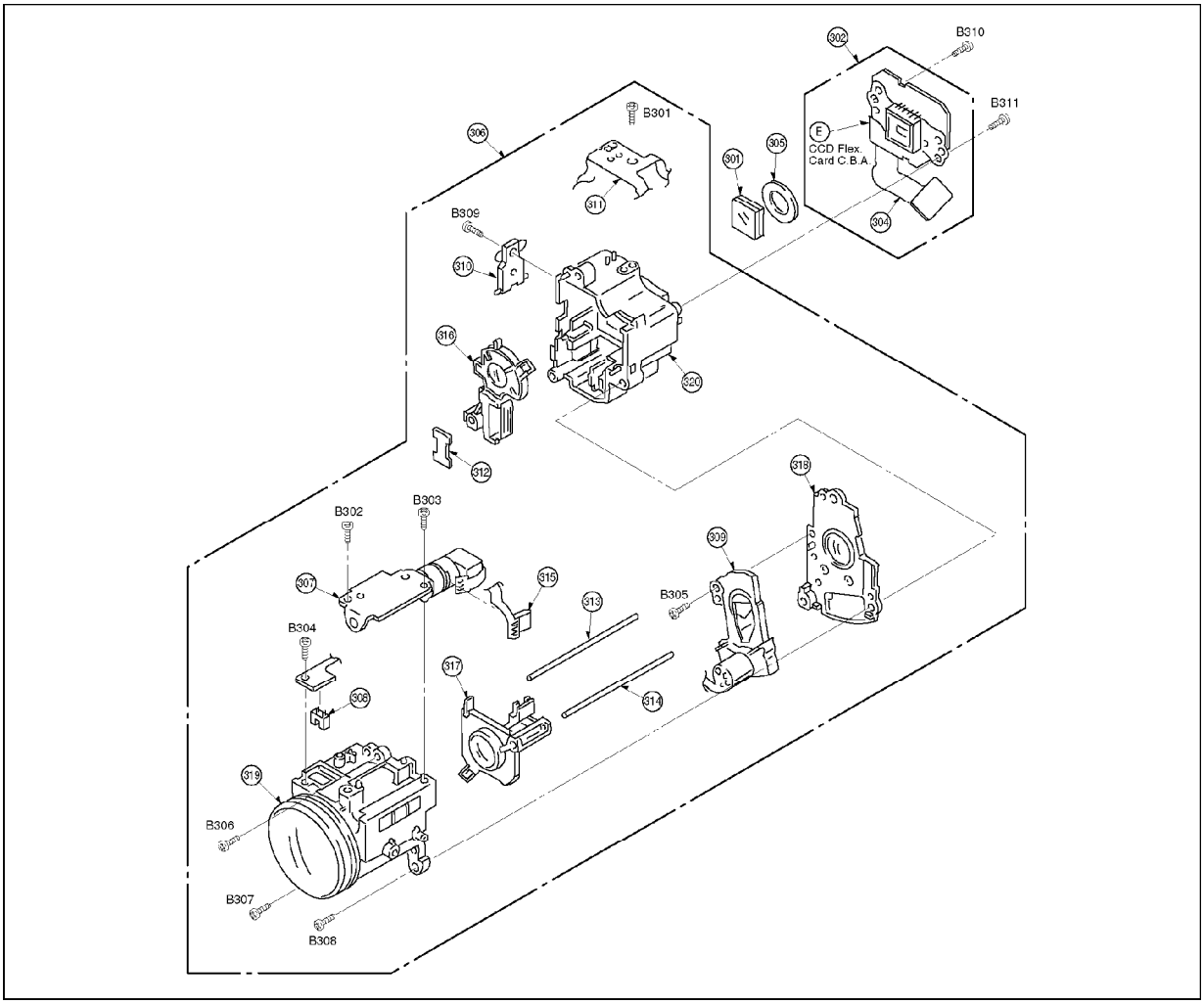
The following flowchart describes order or steps for removing the Camera lens unit and certain printed circuit boards in order to make access to the item needing service.
To reassemble the unit follow the steps in reverse order.

Fig. L1

1. CCD Unit	Ref.No.302
2. CCD Cushion & Crystal Filter	Ref.No.305/301
3. Lens Flex. Unit & Zoom Motor Unit	Ref.No.311/307
4. Master Flange Unit	Ref.No.320
5. Iris Unit & 3rd Moving Frame Unit	Ref.No.309/318
6. Side Yoke	Ref.No.312
7. 4th Moving Frame Unit & Guide Pole	Ref.No.316/313
8. 2nd Moving Frame Unit & Guide Pole	Ref.No.317/314

Note 1:
Each Ref-numbers are equivalent to number of Fig.L2 and Parts List.

Fig. L2



9. ABBREVIATIONS

10. WAVEFORM TABLE

11. SCHEMATIC DIAGRAMS

11.1. OVERALL SCHEMATIC DIAGRAM

11.2. INTERCONNECTION SCHEMATIC DIAGRAM

11.3. CCD FLEX. CARD SCHEMATIC DIAGRAM

11.4. SIDE (L) SCHEMATIC DIAGRAM

11.5. CASSETTE COVER UNIT SCHEMATIC DIAGRAM

11.6. REAR OPERATION UNIT SCHEMATIC DIAGRAM

11.7. MAIN FRAME UNIT (CASSETTE DOWN FLEX. CARD) SCHEMATIC DIAGRAM

11.8. SIDE (R) & LCD DET SCHEMATIC DIAGRAM

11.9. FLASH FLEX. UNIT SCHEMATIC DIAGRAM

11.10. EVF SCHEAMTIC DIAGRAM

11.11. FRONT & MIC UNIT SCHEMATIC DIAGRAM

11.12. JACK SCHEMATIC DIAGRAM

11.13. MONITOR & HALL SENSOR FLEX. SCHEMATIC DIAGRAM

12. CIRCUIT BOARD ASSEMBLIES

12.1. CCD FLEX. CARD C.B.A.

12.2. SIDE (L) C.B.A.

12.3. SIDE (R) C.B.A.

12.4. FRONT C.B.A.

12.5. JACK C.B.A.

12.6. MONITOR C.B.A.

12.7. EVF C.B.A.

12.8. LCD DET C.B.A.

13. EXPLODED VIEWS

13.1. FRAME & CASING SECTION (1)

13.2. FRAME & CASING SECTION (2)

13.3. LCD SECTION

13.4. CAMERA LENS SECTION

13.5. PACKING PARTS & ACCESSORIES SECTION

14. REPLACEMENT PARTS LIST

14.1. FRAME & CASING SECTION (1) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
1	VKF3564	EVR COVER	
2	VWJ1557	FRONT FLEX.	
3	VYK0H12	SIDE CASE (R)	
7	VKF3521	SD LID	
8	VMS7094	SD LID SHAFT	
9	VMB3598	SD LID SPRING	
10	VGQ6749	R PIECE	
11	VGL0849	POWER PANEL LIGHT	
12	VGU9121	MODE SELECT KNOB	
13	VMP7177	LENS FRAME (R)	
14	VMG1107	MECHA. DUMPER RUBBER	
15	VMG1107	MECHA. DUMPER RUBBER	
16	VSC5358	HINGE EARTH PLATE	
20	VGU9120	CAMERA OPERATION BUTTON	
21	VMP7176	SIDE (R) C.B.A. FIXATION PLATE	
22	VWJ1558	SIDE (R) OPERATION FLEX.	
23	VDL1220	EVF LENS	
24	VGQ6689	LENS HOLDER	
25	VKM5895	EVF CASE (UPPER)	
26	VKM5896	EVF CASE (LOWER)	
27	VJF1456	LCD HOLDING PIECE	
28	VGQ6234	LCD MASK	
29	VGQ6753	LCD PROTECT PANEL	
30	VGQ6758	PROTECT PANEL SHEET	
31	VDL1151	EVF REFLECTOR	
32	VGQ6690	BL HOLD PLATE	
33	VGQ6269	PANEL FIXATION TAPE	
34	L5BDDXH00006	EVF LCD PANEL	
35	A2CD00000030	EVF BACKLIGHT	
37	VWJ1555	EVF FLEX.	
38	VXA7404	EVF HINGE U.	
39	VGQ6691	EVF SLIDE FRAME	
40	VGQ6693	EVF SLIDE COVER	
41	VGQ6692	EVF SLIDE PIECE	
42	VMC1784	EVF EARTH SPRING	
43	VMP7179	SHOE FIXATION ANGLE	
44	VGQ6694	SHOE PROTECT PIECE	
45	VGQ6701	SHOE COVER	
46	K1FB108H0012	SHOE TERMINAL SOCKET	
47	VYK0H03	EVF VIEW ADJ. U.	
48	VMG1441	EYE CAP	
49	VGQ4024	EVF FLEX. FIXATION TAPE	
50	VWJ1559	SHOE FLEX.	
51	VYK0H29	REAR CASE U.	
52	VMP7186	SHOULDER BELT ANGLE	
53	VGU9123	BATTERY LOCK BUTTON	
54	VMC1789	BATTERY LOCK SPRING	
55	K4ZZ04000032	BATTERY CATCHER	

Ref. No.	Part No.	Part Name & Description	Remarks
56	VWJ1556	BUS FLEX.	
57	VYK0H22	FRONT U.	
58	VGL0945	TALLY PANEL LIGHT	
59	VKW3041	SENSOR WINDOW	
60	VMP7183	FRONT EARTH ANGLE (UPPER)	
61	VMP7184	FRONT EARTH ANGLE (LOWER)	
62	VYK0E93	MIC NET U.	
64	VGQ6700	MIC CUSHION	
65	VYK0H07	FL CASE U.	
66	VKM5899	FL CASE (REAR)	
67	VDW0809	FL BASE	
68	VYK0H08	FL HOOD SCREW U.	
69	VGK2785	FL DECORATION RING	
71	VMC1785	FL CLICK SPRING	
72	VMS7123	FL CLICK ROLLER	
74	VGK2793	L COVER	
76	VGQ6699	CAPACITOR HOLDER	
77	VZT0476	REFLECTOR FIXATION TAPE	
78	VFC3860	LENS HOOD U.	
79	VGQ6805	CAPACITOR SHEET (A)	
80	VGQ6737	FRONT PROTECT SHEET (A)	
81	VGQ6738	FRONT PROTECT SHEET (B)	
82	VGQ6866	CCD CUSHION	
83	VGQ2839	EVF BARRIER	
84	VGQ6864	BUS FLEX. BARRIER	
85	VGQ6948	FL CUSHION (A)	
86	VGQ6949	FL CUSHION (B)	
87	VGQ6460	TAPE	
88	VGQ6460	TAPE	
B1	XQN16+BJ4FZ	SCREW	
B2	XQN16+BJ4FZ	SCREW	
B3	XQN16+BJ4FZ	SCREW	
B4	XQN16+BJ4FZ	SCREW	
B5	XQN16+BJ4FZ	SCREW	
B6	XQN16+BJ4FZ	SCREW	
B7	VHD0768	SCREW	
B8	VHD0768	SCREW	
B9	VHD1303	SCREW	
B10	VHD1350	SCREW	
B11	XQS2+A35FN	SCREW	
B12	XQS2+A35FN	SCREW	
B13	XQN16+BJ6FN	SCREW	
B14	XQN16+BJ6FN	SCREW	
B15	VHD1262	SCREW	
B16	VHD1262	SCREW	
B17	VHD1532	SCREW	
B18	XQN16+BJ4FN	SCREW	
B19	XQS16+AJ4FN	SCREW	
B20	XQN16+BJ6FN	SCREW	
B21	XQN16+BJ6FN	SCREW	
B22	XQN16+BJ6FN	SCREW	
B23	XQN16+BJ5FZ	SCREW	
B24	XQN16+BJ6FN	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B25	XQN16+BJ6FN	SCREW	
B26	VHD1526	SCREW	
B27	VHD1526	SCREW	
B28	VHD1353	SCREW	
B29	XQN16+B3FZ	SCREW	
B30	XQN16+B3FZ	SCREW	
B31	XQN16+B3FZ	SCREW	
B32	XQN16+B3FZ	SCREW	
B33	XQN16+B3FN	SCREW	
B35	XQN16+BJ3	SCREW	
B36	XQN16+B5FZ	SCREW	
B37	XQN16+BJ5FZ	SCREW	
B38	XQN16+BJ5FZ	SCREW	
B39	XQN16+BJ5FZ	SCREW	
B40	XQN16+BJ5FZ	SCREW	
B41	XQN16+BJ6FN	SCREW	
B42	XQN16+BJ8	SCREW	
B43	XQN16+BJ8	SCREW	
B44	XQN16+BJ4FN	SCREW	
B45	XQN16+B4FZ	SCREW	
B46	XQN16+B4FZ	SCREW	
B47	XQN16+B4FZ	SCREW	
B48	XQN16+B3FN	SCREW	
B49	XQN16+BJ4	SCREW	
B51	XQN16+B4FZ	SCREW	

14.2. FRAME & CASING SECTION (2) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
103	VYK0G87	MECHA. FRAME U.	
104	VGQ6635	MECHA. FLEX. HOLD PIECE	
105	VYK0G88	LENS FRAME (L) U.	
106	VYK0H25	CASSETTE COVER U.	
107	VGP5720	CASSETTE COVER SIDE	
108	VGU9054	RESET BUTTON	
110	ML920S/F9D	LITHIUM BATTERY	
111	VWJ1548	SIDE (L) FLEX.	
112	VGQ5908	SPEAKER SHEET	
113	VGQ6571	GRIP FLEX. HOLD PIECE	
114	VGQ6572	BATTERY PROTECT SHEET	
115	VGQ6580	SIDE L INSULATION SHEET	
116	VMP7107	CASSETTE PLATE	
117	L0AA02A00036	SPEAKER U.	
118	VYK0H26	SIDE CASE (L) U.	
119	VGH4553	JACK NAME PLATE	
120	VKF3523	JACK COVER (L)	
121	VMP7212	GRIP BELT ANGLE (L)	
122	VMP7099	TRIPOD PLATE	
123	VGQ6638	TRIPOD PIECE	
124	VGU9098	CASSETTE BUTTON	
125	VYQ2478	MAIN FRAME U.	
126	N9ZZ00000149	REAR OPERATION U.	
127	VMP7211	REAR OPERATION FIXING PLATE	
128	VMP7143	GRIP BELT ANGLE (REAR)	
129	VYC0880	GRIP BELT U.	
130	VGQ6639	GRIP BELT PIECE	
131	VMP7142	GRIP BELT FIXATION ANGLE	
133	VWJ1547	JACK FLEX.	
134	VWJ1549	SUB FLEX.	
136	VXY1710	MECHA. U.	
B101	XQN16+BJ35FZ	SCREW	
B102	XQN16+BJ35FZ	SCREW	
B103	XQS16+AJ4FN	SCREW	
B104	XQN2+B3	SCREW	
B105	XQN16+BJ4	SCREW	
B106	XQN16+BJ4	SCREW	
B107	XQN16+BJ4	SCREW	
B108	XQN16+BJ5FZ	SCREW	
B109	XQN16+BJ5FZ	SCREW	
B110	XQN16+B2FN	SCREW	
B111	XQN16+B3FZ	SCREW	
B112	XQN16+B3FZ	SCREW	
B113	XQN16+B3FZ	SCREW	
B114	XQN16+B3FZ	SCREW	
B115	XQN16+B3FZ	SCREW	
B116	XQN16+B3FZ	SCREW	
B117	XQN16+B3FZ	SCREW	
B118	XQN16+B3FZ	SCREW	
B119	XQN16+B3FZ	SCREW	
B120	XQN16+B3FZ	SCREW	
B121	XQN16+B3FZ	SCREW	
B122	XQN16+B3FZ	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B123	VHD1533	SCREW	
B124	VHD1533	SCREW	
B125	VHD1532	SCREW	
B126	XQN16+BJ6FZ	SCREW	
B127	VHD1353	SCREW	
B128	VHD1133	SCREW	
B129	VHD1133	SCREW	
B130	VHD1133	SCREW	
B131	XQN16+B2FN	SCREW	
B132	XQN16+B2FN	SCREW	
B133	XQN16+B2FN	SCREW	
B134	XQN16+B2FN	SCREW	
B135	XQN16+B2FN	SCREW	
B136	XQN16+B2FN	SCREW	

14.3. LCD SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
201	VYK0H15	LCD CASE (UPPER) U.	NV-GX7EG/EGM/B
201	VYK0H19	LCD CASE (UPPER) U.	NV-GX7EN/A/ENT
202	VGQ6557	LCD LOCK PIECE	
203	VMP7094	LCD LOCK PLATE	
204	VMB3600	LCD LOCK SPRING	
205	VKM5894	LCD CASE (LOWER)	
206	VXD0367	LCD HINGE U.	
207	VYK0F26	BACKLIGHT U.	
208	L5BDDYM00005	LCD PANEL U.	
209	VMP7178	LCD FRAME	
212	VGL0991	DIFFUSION SHEET	
213	VGQ4758	PROTECT SHEET	
216	VGQ5507	FLEX. FIXATION TAPE	
B201	XQS16+AJ3	SCREW	
B202	VHD1459	SCREW	
B203	VHD1459	SCREW	
B204	XQN16+B25FN	SCREW	
B205	XQN16+B25FN	SCREW	

14.4. CAMERA LENS SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
301	VDL1301	CRYSTAL FILLTER	
302	VEK9699	CCD U.	
304	VJB22326	CCD FLEX.	
305	VMX2973	CCD CUSHION	
306	VXW0538	LENS U.	
307	08S1E13F6NF2	ZOOM MOTOR U.	
308	CNA1312K01VT	PHOTO SENSOR	
309	L9ZZ00000191	IRIS U.	
310	VEK8449	MR SENSOR U.	
311	VEK9648	LENS FLEX. U.	
312	VMA9961	SIDE YOKE	
313	VMS6812	GUIDE POLE	
314	VMS6812	GUIDE POLE	
315	VMX3055	ZM CONNECTOR BASE	
316	VXP2152	4TH MOVING FRAME U.	
317	VXP2183	2ND MOVING FRAME U.	
318	VXQ0968	3RD MOVING FRAME U.	
319	VXQ1066	MAIN FRAME U.	
320	VXQ1067	MASTER FLANGE U.	
B301	VHD1508	SCREW	
B302	VHD1508	SCREW	
B303	VHD1508	SCREW	
B304	VHD1508	SCREW	
B305	VHD1508	SCREW	
B306	VHD1509	SCREW	
B307	VHD1509	SCREW	
B308	VHD1509	SCREW	
B309	XQN16+CJ4FY	SCREW	
B310	XQN16+CJ4FY	SCREW	
B311	XQN16+CJ4FY	SCREW	

14.5. PACKING PARTS & ACCESSORIES SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Rema
401	VPG0P78	PACKING	NV-GX7EG
401	VPG0P79	PACKING	NV-GX7EGM
401	VPG0P80	PACKING	NV-GX7B
401	VPG0P81	PACKING	NV-GX7EN/A/ENT
402	VQT9797	OPERATING INSTRUCTIONS (GERMAN,FRENCH,ITALIAN,DUTCH)	⚠ NV-GX7EG
402	VQT9798	OPERATING INSTRUCTIONS (PORTUGUESE,SPANISH,SWEDISH,DANISH)	⚠ NV-GX7EGM
402	VQT9799	OPERATING INSTRUCTIONS (ENGLISH)	⚠ NV-GX7B
402	VQT9800	OPERATING INSTRUCTIONS (ENGLISH,CHINESE,RUSSIAN,ARABIC)	⚠ NV-GX7EN/ENT
402	VQT9801	OPERATING INSTRUCTIONS (ENGLISH)	⚠ NV-GX7A
403	VQT9833	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM)(GERMAN,FRENCH,ITALIAN,DUTCH)	⚠NV-GX7EG
403	VQT9834	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM)(PORTUGUESE,SPANISH,SWEDISH,DANISH)	⚠NV-GX7EGM
403	VQT9835	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM)(ENGLISH)	⚠NV-GX7B/A
403	VQT9836	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM)(ENGLISH,CHINESE,RUSSIAN,ARABIC)	⚠NV-GX7EN/ENT
404	VJA0664	AC CORD	⚠K2CR2DA00004 NV ENT
404	VJA0754	AC CORD	⚠K2CJ2DA00002 NV
404	VJA0940	AC CORD	⚠ K2CT3DA00003 NV
405	VJA0940	AC CORD	⚠ K2CT3DA00003 NV
406	RP-SD008BVE0	SD CARD	
407	N2QCAD000001	UNIVERSAL REMOTE CONTROLLER	
408	VFC3506-1A	SHOULDER BELT	
409	VGQ5138	HOOD STRAP	
410	VYP7852	HOOD CAP U.	
411	VPN5809	CUSHION	
412	VYP8616	MEGA HOOD	
413	VFA0363	USB CABLE	
414	VFF0155-S	CD-ROM FOR PC KIT	
415	VEK8925	DC CABLE	K2GJ2DZ00011
416	K2KC4CB00002	AV CABLE	
417	N2QAEC000003	REMOTE CONTROLLER	
418	VFK1451	HEAD CLEANER	NV-GX7EN/A/ENT

14.6. ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE: Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=uuF.
4. The P.C. Board units marked width "■" show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP03G17K	MAIN C.B.A.	(RTL)
■	VEP23567B	SUB C.B.A.	(RTL)
■	VEP22326A	CCD FLEX.CARD C.B.A.	(RTL)
■	VEP06E78A	SIDE (L) C.B.A.	(RTL)
■	VEP04809B	JACK C.B.A.	(RTL)
■	VEP06E82A	SIDE (R) C.B.A.	(RTL)
■	VEP26273A	MONITOR C.B.A.	(RTL) INCLUDING THE HALL SENSOR FLEX.CARD U.(VEP06E80A).
■	VEP06E80A	HALL SENSOR FLEX.CARD U.	(RTL) INCLUDED IN MONITOR C.B.A.(VEP26273A).
■	VEP28294A	EVF FLEX.CARD U.	(RTL)
■	VEK9739	MIC UNIT	(RTL)
■	VEK9737	FLASH FLEX.UNIT	(RTL)
■	VEP04808A	FRONT C.B.A.	(RTL)
■	VEP06E77B	LCD DET C.B.A.	(RTL)
■	VEP22326A	CCD FLEX.CARD C.B.A.	(RTL)
C294	ECST1VX225R	T.CAPACITOR CH 35V 2.2U	
C295	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C296	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C297	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
D291	MA143	DIODE	
PP291	K1KA20A00170	CONNECTOR	
Q291	2SC4627J0L	TRANSISTOR	
R292	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	
■	VEP06E78A	SIDE (L) C.B.A.	(RTL)
B6101	ML920S/F9D	LITHIUM BATTERY	
C2601	ECJ1VC1H060C	C.CAPACITOR CH 50V 6P	
C2602	ECJ1VC1H060C	C.CAPACITOR CH 50V 6P	
C2603	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C6304	ECJ1ZB1H103K	C.CAPACITOR CH 35V 0.01U	
D6301	MA133	DIODE	MA3S133
FP6301	K1MN21B00036	CONNECTOR	
FP6302	VJS4298B008	CONNECTOR (FEMALE) 8P	K1MN08B00048

Ref. No.	Part No.	Part Name & Description	Remarks
IC2601	S3514AEFSTB	IC	C1ZBZ0001483
R6301	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	
R6302	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
S6302	VSP1102	SWITCH	K0H1BA000260
VZ6301	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
X2601	VSX0601	CRYSTAL OSCILLATOR	H0J327200051
■	VEP04809B	JACK C.B.A.	(RTL)
C2501	ECJ1VB1C473K	C.CAPACITOR CH 16V 0.047U	
C2502	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C2503	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C2504	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C2506	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C2507	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C2508	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C2509	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C2510	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C2511	F3F0J4760002	TANTALUM CAPACITOR	
C2512	F1J0J4750004	CERAMIC CAPACITOR	
C3901	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C3902	F1J0J4750004	CERAMIC CAPACITOR	
C3903	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C3904	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C3905	ECUX1H050CCQ	C.CAPACITOR CH 50V 5P	
C4001	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	
C4002	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	
C4901	ECUX1E222KBQ	C.CAPACITOR CH 25V 2200P	
C4902	ECUX1E222KBQ	C.CAPACITOR CH 25V 2200P	
C4903	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C4904	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C4905	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C4906	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C4908	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C4910	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C4911	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C4912	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
D2501	MA2S728	DIODE	
D4901	MA2SD2400L	DIODE	
FP6201	K1MN39B00004	CONNECTOR	
FP6202	VJS3320D010	CONNECTOR (FEMALE) 10P	K1MN10B00042
HS3401	K1NA09E00024	CONNECTOR	
IC2501	C0ZBZ0000540	IC	
IC2502	C0CBCBC00037	IC	
IC2503	NJM2407R	IC	C0BZBB000001

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
JK2501	VJJ0580	JACK (4P)	
JK2502	K2HZ108B0004	8-PIN JACK	
JK3801	K2YZ04000016	JACK	
JK4001	K2HC107B0002	JACK	
JK4901	K2HC103B0137	JACK	
L2501	G1C4R7M00016	CHIP INDUCTOR	
L2502	VLQ0911K100	COIL 10UH	G1C100K00019
LB2501	J0JAC0000014	FILTER	J0JAC0000016
LB2502	J0JAC0000014	FILTER	J0JAC0000016
LB2503	VLF1143A102	COIL 1000UH	J0JBC0000026
LB2504	VLF1143A102	COIL 1000UH	J0JBC0000026
LB2505	J0JAC0000014	FILTER	J0JAC0000016
LB2506	J0JHC0000032	FILTER	
LB2507	J0JAC0000014	FILTER	J0JAC0000016
LB2508	J0JAC0000014	FILTER	J0JAC0000016
LB2509	J0JAC0000014	FILTER	J0JAC0000016
LB4001	J0JBC0000042	INDUCTOR	
LB4003	J0JAC0000014	FILTER	J0JAC0000016
LB4005	J0JAC0000014	FILTER	J0JAC0000016
LB4006	J0JAC0000014	FILTER	J0JAC0000016
LB4007	J0JAC0000014	FILTER	J0JAC0000016
LB4008	J0JAC0000014	FILTER	J0JAC0000016
LB4921	J0JAC0000014	FILTER	J0JAC0000016
LB4925	VLP0329A241	COIL	
LB4926	VLP0329A241	COIL	
LB4927	J0JHC0000032	FILTER	
Q4901	2SD2216J0L	TRANSISTOR	
Q4902	2SB1462-R	TRANSISTOR	2SB14620R
Q4903	2SD2216J0L	TRANSISTOR	
Q4904	2SB1462-R	TRANSISTOR	2SB14620R
Q4907	B1ABBE000002	TRANSISTOR	
QR2501	RN1706R	TRANSISTOR-RESISTOR	B1GFCFGN0004
QR4901	UN9113	TRANSISTOR-RESISTOR	UNR9113
R2507	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R2508	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R2509	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	
R2510	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	
R2511	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	
R2513	ERJ2GEJ103Y	M.RESISTOR CH 1/16W 10K	
R2514	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	
R2516	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R2517	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R2518	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	
R2519	ERJ2GEJ101Y	M.RESISTOR CH 1/16W 100	
R2520	ERJ2GEJ101Y	M.RESISTOR CH 1/16W 100	
R3901	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	
R3902	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	
R3903	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	

Ref. No.	Part No.	Part Name & Description	Remarks
R3904	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3905	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3906	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3908	ERJ2GEJ331X	M.RESISTOR CH 1/16W 330	ERJ2RMJ331X
R3909	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	ERJ2RMJ220X
R3910	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	
R3911	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3912	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	ERJ2RMJ220X
R3913	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R4001	ERJ2GEJ101Y	M.RESISTOR CH 1/16W 100	
R4002	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	
R4003	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R4901	ERJ2GEJ682X	M.RESISTOR CH 1/16W 6.8K	ERJ2RMJ682X
R4902	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R4903	ERJ2GEJ682X	M.RESISTOR CH 1/16W 6.8K	ERJ2RMJ682X
R4905	ERJ2GEJ471X	M.RESISTOR CH 1/16W 470	ERJ2RMJ471X
R4906	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4907	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	
R4908	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	
R4909	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R4910	ERJ2GEJ562X	M.RESISTOR CH 1/16W 5.6K	
R4911	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	
R4912	ERJ2GEJ471X	M.RESISTOR CH 1/16W 470	ERJ2RMJ471X
R4913	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4914	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	
R4915	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	
R4916	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R4917	ERJ2GEJ562X	M.RESISTOR CH 1/16W 5.6K	
R4918	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	
VZ2501	D4ED1120A002	TRANSIENT/SURGE ABSORBER	
VZ2502	D4ED1220A006	TRANSIENT/SURGE ABSORBER	
VZ4001	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
VZ4002	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
VZ4901	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
		MISCELLANEOUS	
	VGQ6781	SHEET	
■	VEP06E82A	SIDE (R) C.B.A.	(RTL)
C6101	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
D6101	B3AAB0000129	LED	
FP6101	VJS3320D018	CONNECTOR (FEMALE) 18P	K1MN18B00037
S6101	VSS0533	SLIDE SWITCH	K0D112A00116
S6105	K0H1BA000436	SWITCH	
S6106	K0H1BA000436	SWITCH	
S6107	K0H1BA000436	SWITCH	
S6108	K0H1BA000436	SWITCH	
S6109	K0H1BA000436	SWITCH	

[illegible]	[illegible]	[illegible]	

Ref. No.	Part No.	Part Name & Description	Remarks
S6110	K0H1BA000436	SWITCH	
S6111	K0H1BA000436	SWITCH	
S6112	K0H1BA000436	SWITCH	
S6401	K0H1BA000436	SWITCH	
■	VEP26273A	MONITOR C.B.A.	(RTL)
C901	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C902	ECST0GY476Z	T.CAPACITOR CH 4V 47U	F3F0G476A009
C903	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C904	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C905	ECUM1C106VB	C.CAPACITOR CH 16V 10U	
C906	ECUM1C106VB	C.CAPACITOR CH 16V 10U	
C907	F3F0J335A008	TANTALUM CAPACITOR	
C910	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	
C911	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	
C912	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	
C913	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	
C916	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C917	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C918	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C919	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C923	ECUX1H471GCV	C.CAPACITOR CH 50V 470P	
C925	ECST1AY106R	T.CAPACITOR CH 10V 10U	
C930	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C931	ECJ0EC1H330J	C.CAPACITOR CH 50V 33P	
C932	ECUX1H221JCQ	C.CAPACITOR CH 50V 220P	
C933	ECJ2YB1C474K	C.CAPACITOR CH 16V 0.47U	
C934	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C935	ECUX1C682KBQ	C.CAPACITOR CH 16V 6800P	
C936	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C937	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C938	ECJ0EC1H101J	C.CAPACITOR CH 50V 100P	
C939	ECUX1H331GCV	C.CAPACITOR CH 50V 330P	
C940	ECJ0EC1H560J	C.CAPACITOR CH 50V 56P	
C941	F1G1H100A448	CERAMIC CAPACITOR	
C942	ECJ2YB1C474K	C.CAPACITOR CH 16V 0.47U	
C943	ECJ1VB1A224K	C.CAPACITOR CH 10V 0.22U	
C944	ECJ1VB1A224K	C.CAPACITOR CH 10V 0.22U	
C945	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C947	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C948	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C949	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C950	F1J1C105A091	CERAMIC CAPACITOR	
C952	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
D901	MA2X33800L	DIODE	
D902	HN2D01FUR	SWITCHING DIODE	B0ADDJ000011
D903	MA132WA	DIODE	MA3S132D
D904	MA4X159A0L	DIODE	
D905	1SS388	DIODE	B0JEEE000001
D906	1SS388	DIODE	B0JEEE000001
D907	MA2J11100L	DIODE	

[illegible]	[illegible]	[illegible]	

Ref. No.	Part No.	Part Name & Description	Remarks
D908	MA8027-L	DIODE	MAZ80270L
D909	MA8043-M	DIODE	MAZ80430M
FP901	K1MN24B00068	CONNECTOR	K1MN24B00069
FP903	K1MN25B00033	CONNECTOR	K1MN25B00034
IC901	C0HBA0000071	IC	
IC902	C0CBCAC00046	IC	
IC903	AHC1G04DCK	IC	C0JBAB000350
IC904	SN32461DCK	IC	C0JBAB000391
IC905	SN74LV04APW	IC	C0JBAB000247
IC991	DN8797MS	HALL IC	
L901	VLQ0807K100	COIL 10UH	G1C100K00024
L902	VLQ0807K100	COIL 10UH	G1C100K00024
L905	VLQ0807K100	COIL 10UH	G1C100K00024
L907	VLQ0426J3R3	COIL 3.3UH	G1C3R3J00009
Q902	2SK2159	TRANSISTOR	
Q903	B1HFCFA00015	TRANSISTOR ARRAY	
Q906	B1HFCFA00015	TRANSISTOR ARRAY	
Q907	B1HFCFA00015	TRANSISTOR ARRAY	
Q908	B1HFCFA00015	TRANSISTOR ARRAY	
QR901	UNR9210J0L	TRANSISTOR-RESISTOR	
QR902	UNR9210J0L	TRANSISTOR-RESISTOR	
QR903	UN9214J	TRANSISTOR-RESISTOR	
R901	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	
R902	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	
R903	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	
R904	ERJ3RBD333V	M.RESISTOR CH 1/16W 33K	
R905	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	
R907	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R908	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R909	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R911	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R912	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R913	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R914	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R917	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R918	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R919	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
R920	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	
R923	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
R924	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R925	ERJ3RBD104	M.RESISTOR CH 1/16W 100K	
R926	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	
R927	ERJ3GEYJ823V	M.RESISTOR CH 1/16W 82K	D0GB823JA002
R929	ERJ3RBD273	M.RESISTOR CH 1/16W 27K	
R930	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
R931	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
R932	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R933	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002

Ref. No.	Part No.	Part Name & Description	Remarks
R934	ERJ3RBD272V	M.RESISTOR CH 1/16W 2.7K	
R935	ERJ3RBD273	M.RESISTOR CH 1/16W 27K	
R936	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R937	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	
R938	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
R942	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
R943	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
R944	ERJ3GEYJ274V	M.RESISTOR CH 1/16W 270K	
R951	ERJ3GEYJ560V	M.RESISTOR CH 1/16W 56	
R952	ERJ3GEYJ472A	M.RESISTOR CH 1/16W 4.7K	
R953	ERJ3GEYJ823V	M.RESISTOR CH 1/16W 82K	D0GB823JA002
R955	ERJ3RBD333V	M.RESISTOR CH 1/16W 33K	
R956	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	
R957	ERJ3RBD101	M.RESISTOR CH 1/16W 100	ERJ3RBD101V
R958	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R959	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	
R960	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	
R961	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R962	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	
R963	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	
R964	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R965	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R966	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	
R967	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	
R968	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R969	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R970	ERJ3GEYJ562V	M.RESISTOR CH 1/16W 5.6K	D0GB562JA002
R971	ERJ3GEYJ335V	M.RESISTOR CH 1/16W 3.3M	
R972	ERJ3GEYJ224V	M.RESISTOR CH 1/16W 220K	D0GB224JA002
R973	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	
R974	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	
R975	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	
R976	ERJ3RBD621	M.RESISTOR CH 1/16W 620	
R977	ERJ3RED200	M.RESISTOR CH 1/16W 20	
R978	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	
R979	ERJ3GEYJ224V	M.RESISTOR CH 1/16W 220K	D0GB224JA002
R985	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	
R986	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	
R989	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	
T901	ETJ09K59AZ	CHIP TRANSFORMER	
T902	EFTU21R204	TRANSFORMER	
■	VEP06E80A	HALL SENSOR FLEX.CARD U.	(RTL)
IC991	DN8797MS	HALL IC	
■	VEP28294A	EVF FLEX.CARD U.	(RTL)
C802	F1L1A2260013	CERAMIC CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
FP801	K1MN19B00029	CONNECTOR	K1MN19B00030
FP802	VJS4353B016	CONNECTOR (FEMALE) 16P	
L881	VLQ0779K100	COIL 10UH	G1C100KA0005
Q881	2SK2055	TRANSISTOR	
T881	ETJ11K73AM	TRANSFORMER	
■	VEK9739	MIC UNIT	(RTL)
		MISCELLANEOUS	
	VMT1212	MIC DUMPER RUBBER	
■	VEK9737	FLASH FLEX.UNIT	(RTL)
Q7005	PNA1101LW	PHOTO TRANSISTOR	
■	VEP04808A	FRONT C.B.A.	(RTL)
C491	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C492	ECJ1VB1A224K	C.CAPACITOR CH 10V 0.22U	
C493	ECJ1VB1A224K	C.CAPACITOR CH 10V 0.22U	
C4801	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4802	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4803	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C4804	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C4805	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4806	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4807	F1J0J4750004	CERAMIC CAPACITOR	
C4808	F3F0J4760002	TANTALUM CAPACITOR	
C4811	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C4812	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C4899	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C6401	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C6402	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C7001	ECUX1C223KBQ	C.CAPACITOR CH 16V 0.022U	
C7002	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	
C7003	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C7004	F2AZZ7500003	ELECTROLYTIC CAPACITOR	
C7006	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C7007	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C7008	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C7009	ECUX1A473KBQ	C.CAPACITOR CH 10V 0.047U	
C7010	F1J1C105A091	CERAMIC CAPACITOR	
C7011	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C7012	ECUX1A334KBV	C.CAPACITOR CH 10V 0.33U	
D491	MA132WA	DIODE	MA3S132D
D6801	B3AAB0000129	LED	

Ref. No.	Part No.	Part Name & Description	Remarks
D6802	B3GA00000022	PHOTO DIODE	
D7003	B0ECKT000001	DIODE	
D7004	MAZU3000LL	DIODE	
FP4801	K1MN28A00025	CONNECTOR	
FP4802	VJS3320D005	CONNECTOR (FEMALE) 5P	K1MN05B00028
FP7002	VJS3971B033	CONNECTOR (FEMALE) 33P	
IC4801	NJM2115VA	IC	C0ABBB000106
IC7001	C0JBAA000099	LOGIC IC	
IC7002	C0BBAZ000003	IC	
IC7003	B1JBLP000004	TRANSISTOR	
IR6401	PNA4618M05VT	PHOTO IC	
JK3001	K2HZ104D0001	S-JACK	
L7001	G1C560MA0024	INDUCTOR	
LB3961	J0JBC0000042	INDUCTOR	
LB3963	J0JBC0000042	INDUCTOR	
Q491	2SD1030	TRANSISTOR	
Q492	2SD1819A-R	TRANSISTOR	2SD1819AR
Q4803	2SD1819A0L	TRANSISTOR	
Q7001	B1BDDG000001	TRANSISTOR	B1BDDG000005
Q7002	2SB1462-R	TRANSISTOR	2SB14620R
Q7003	B1ABBE000002	TRANSISTOR	
QR7001	UN921F	TRANSISTOR	
QR7002	B1GBBEMM0001	TRANSISTOR-RESISTOR	
QR7003	B1GDBEHH0001	TRANSISTOR-RESISTOR	
QR7005	UNR9210J0L	TRANSISTOR-RESISTOR	
QR7006	UN921F	TRANSISTOR	
R491	ERJ2GEJ225X	M.RESISTOR CH 1/16W 2.2M	ERJ2RMJ225X
R492	ERJ2GEJ334X	M.RESISTOR CH 1/16W 330K	ERJ2RMJ334X
R493	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R494	ERJ2GEJ182	M.RESISTOR CH 1/16W 1.8K	
R495	ERJ3GEYJ106V	M.RESISTOR CH 1/16W 10M	
R3961	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R4801	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R4802	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R4803	ERJ2GEJ683X	M.RESISTOR CH 1/16W 68K	ERJ2RMJ683X
R4804	ERJ2GEJ683X	M.RESISTOR CH 1/16W 68K	ERJ2RMJ683X
R4805	ERJ2GEJ394X	M.RESISTOR CH 1/16W 390K	ERJ2RMJ394X
R4806	ERJ2GEJ394X	M.RESISTOR CH 1/16W 390K	ERJ2RMJ394X
R4813	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	
R4814	ERJ2GEJ333X	M.RESISTOR CH 1/16W 33K	ERJ2RMJ333X
R4815	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R6401	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R6402	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	
R6803	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	
R7001	ERJ6GEYJ330V	M.RESISTOR CH 1/10W 33	

Ref. No.	Part No.	Part Name & Description	Remarks
R7002	ERJ2GEJ393X	M.RESISTOR CH 1/16W 39K	ERJ2RMJ393X
R7003	ERJ2GEJ222	M.RESISTOR CH 1/16W 2.2K	
R7004	ERJ2GEJ822X	M.RESISTOR CH 1/16W 8.2K	ERJ2RMJ822X
R7005	ERJ2GEJ334X	M.RESISTOR CH 1/16W 330K	ERJ2RMJ334X
R7006	ERJ2GEJ564X	M.RESISTOR CH 1/16W 560K	ERJ2RMJ564X
R7008	ERJ2GEJ330X	M.RESISTOR CH 1/16W 33	
R7009	ERJ2GEJ101Y	M.RESISTOR CH 1/16W 100	
R7010	ERJ2GEJ103Y	M.RESISTOR CH 1/16W 10K	
R7011	ERJ2GEJ563X	M.RESISTOR CH 1/16W 56K	
R7013	ERJ2GEJ561X	M.RESISTOR CH 1/16W 560	ERJ2RMJ561X
R7014	ERJ2GEJ122	M.RESISTOR CH 1/16W 1.2K	
R7015	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	
R7016	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	
R7017	ERJ2GEJ332X	M.RESISTOR CH 1/16W 3.3K	ERJ2RMJ332X
R7018	ERJ2GEJ681X	M.RESISTOR CH 1/16W 680	ERJ2RMJ681X
R7019	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	ERJ2RMJ220X
R7021	ERJ2GEJ332X	M.RESISTOR CH 1/16W 3.3K	ERJ2RMJ332X
R7022	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R7098	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R7099	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
T7001	G5DYA0000033	SWITCHING TRANSFORMER	G5DYA0000032
VZ3952	D4ED1120A002	TRANSIENT/SURGE ABSORBER	
VZ6401	D4ED1270A008	TRANSIENT/SURGE ABSORBER	
VZ6402	D4ED1270A008	TRANSIENT/SURGE ABSORBER	
VZ7001	D4ED1270A003	TRANSIENT/SURGE ABSORBER	
■	VEP06E77B	LCD DET C.B.A.	(RTL)
S6701	K0L1BA000071	SWITCH	

15. SCHEMATIC DIAGRAM FOR PRINTING WITH A4 SIZE

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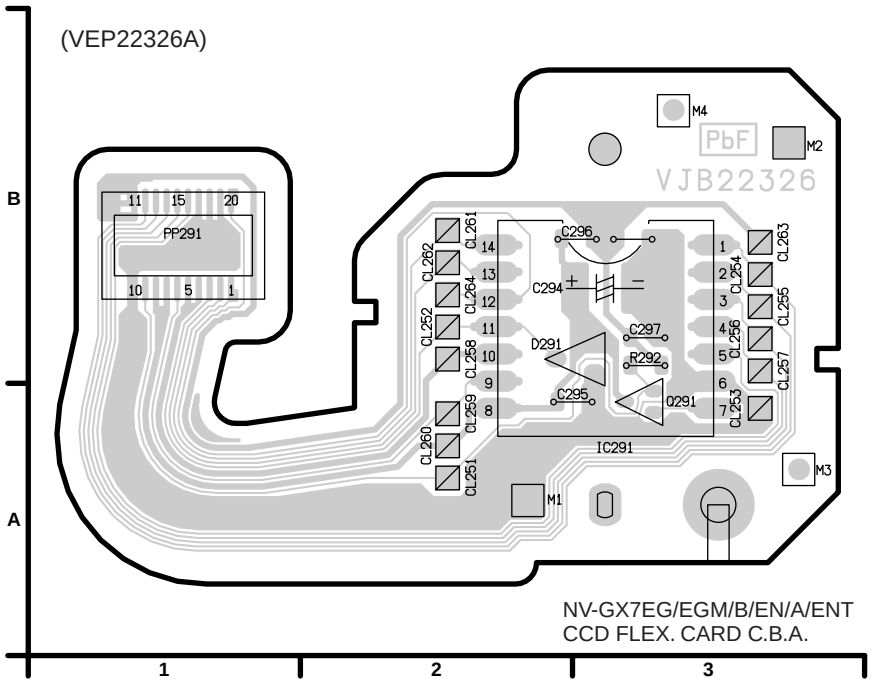
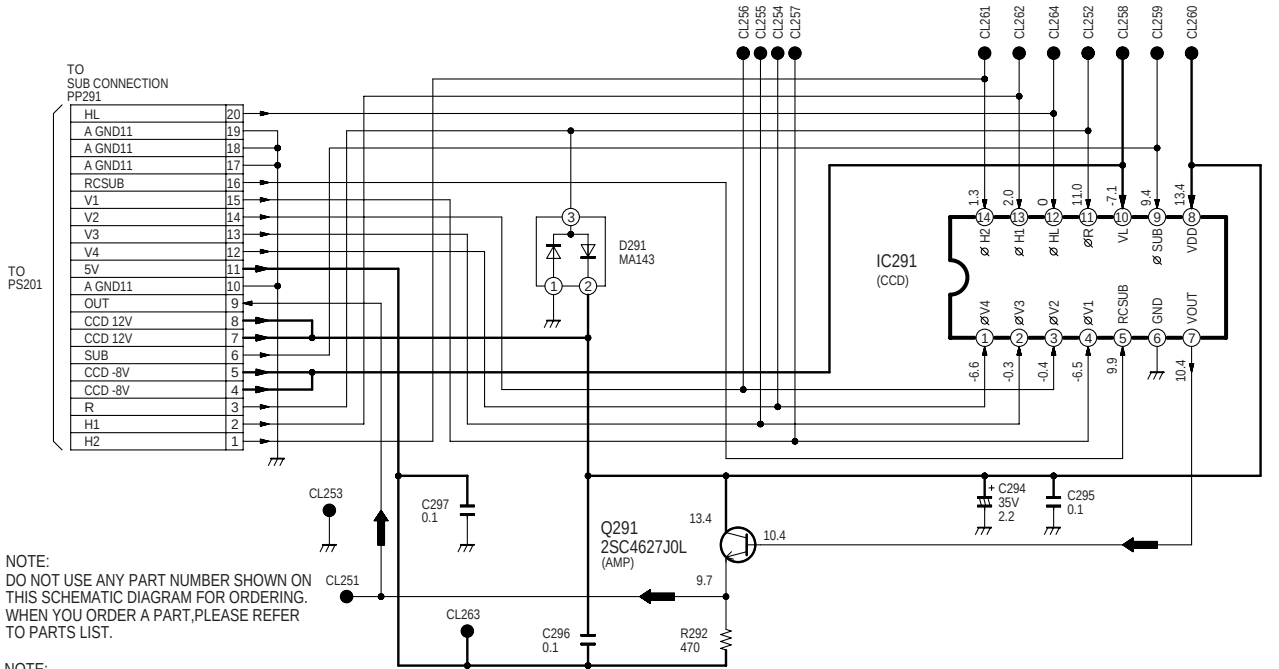
(VEP22326A)



NV-GX7EG/EGM/B/EN/A/ENT
CCD FLEX. CARD C.B.A.

(CCD FLEX.CARD C.B.A.)

:VIDEO MAIN SIGNAL PATH



NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

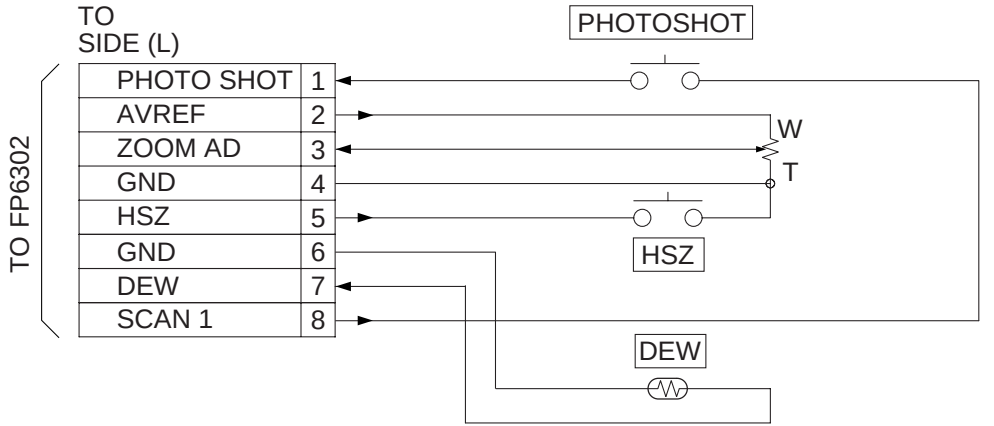
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-GX7EG/EGM/B/EN/A/ENT
CCD FLEX. CARD SCHEMATIC DIAGRAM

C B A

1 2 3 4 5

(CASSETTE COVER UNIT)



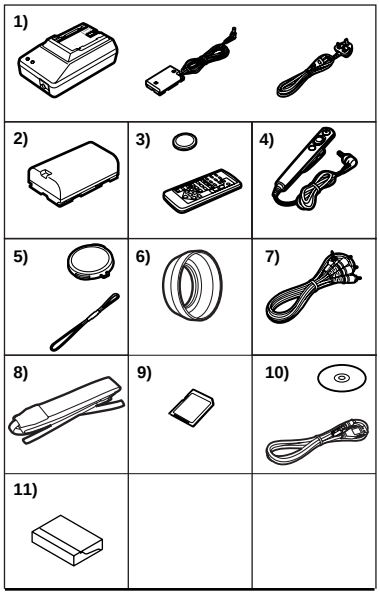
NV-GX7EG/EGM/B/EN/A/ENT
CASSETTE COVER UNIT SCHEMATIC DIAGRAM

C B A

1 2 3 4

Standard Accessories

Illustrated are accessories supplied with the Movie Camera.

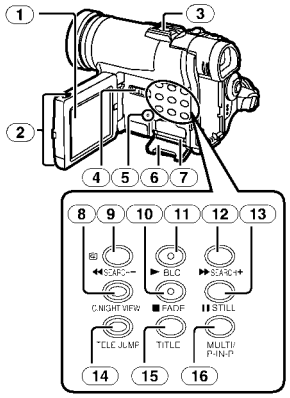


1) AC Adaptor, DC Input Lead and AC Mains Lead
2) Battery Pack
3) Remote Controller and Button-Type Battery
4) Free Style Controller
5) Lens Ca
6) Lens Hood for Card Mode Recording
- By attaching the supplied Lens Hood for Card Mode Recording that blocks direct sunlight in Card Mode Recording, you can get better image. However, Lens Cap cannot be attached.

7) AV Cable
8) Shoulder Strap
9) SD Memory Card
10) USB Connection Kit
11) Head Cleaner (NV-GX7EN/A/ENT)

Controls and Components

■ Movie Camera

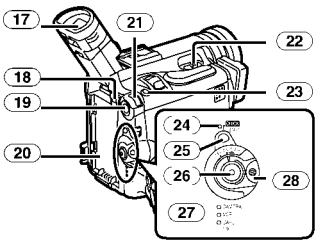


(1) LCD Monitor

- Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD Monitor screen. However, this is not a malfunction and does not affect the recorded picture.

(2) LCD Monitor Open Knob [OPEN▼]
(3) Smart Accessory Shoe
- The Video Flash (VW-FLH3E: optional) or the Stereo Microphone (VW-VMS2E: optional), etc. can be attached here. Power is supplied directly from the Movie Camera when using an accessory supported by the Smart Accessory Shoe.
- Do not touch the connector part of the Smart Accessory Shoe.

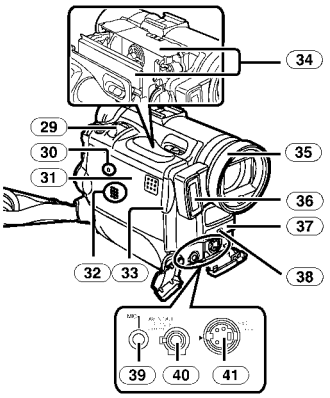
(4) Tape/Card Photoshot/Card Mode Selector [TAPE/CARD/CARD MODE]
(5) Card Access Lamp [ACCESS]
(6) Card Slot Cover
(7) Card Slot
(8) Colour Night View Button [C.NIGHT VIEW]
(9) Rewind/Review Button [◀◀]
Reverse Search Button [SEARCH−]
Recording Check Button [⮌]
(10) Stop Button [■]
Fade Button [FADE]
(11) Play Button [▶]
Backlight Button [BLC]
(12) Fast Forward/Cue Button [▶▶]
Forward Search Button [SEARCH+]
(13) Pause Button [❚❚]
Still Button [STILL]
(14) 1.3 Times Tele Jump Zoom Button [TELE JUMP]
(15) Title Button [TITLE]
(16) Multi Button [MULTI]
Picture-in-Picture Button [P-IN-P]



(17) Viewfinder

- Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the Viewfinder screen. However, this is not a malfunction and does not affect the recorded picture.

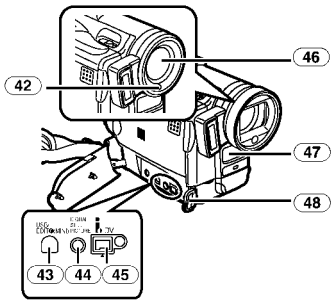
(18) Battery Eject Button [PUSH BATT]
(19) Menu Button [MENU]
(20) Battery Holder
(21) Multi-Function Dial [PUSH]
(22) Cassette Eject Lever [OPEN/EJECT]
(23) Photoshot Button [PHOTO SHOT]
(24) Quick Start Recording Lamp
(25) Quick Start Recording Button [QUICK START]
(26) Recording Start/Stop Button
(27) Operation Mode Lamps [CAMERA/VCR/CARD P.B]
(28) Off/On Mode Selector Switch [OFF/ON/MODE]



(29) Zoom Lever [W/T]
(30) Reset Button [RESET]
(31) Cassette Compartment Cover
(32) Speaker
(33) Cassette Holder Close Button [PUSH CLOSE]
(34) Cassette Holder
(35) Lens Hood
(36) Free Angle Flash
(37) White Balance Sensor
Remote Control Sensor
(38) Recording Lamp
(39) Microphone Socket [MIC]
- Connect with an external microphone or audio equipment. (When this socket is in use, the built-in microphone does not operate.)

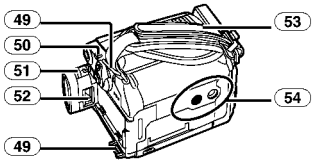
(40) Audio-Video Input/Output Socket [AV IN/OUT]
Headphone Socket [PHONES]
Free Style Controller Socket [REMOTE]
- Connecting an AV Cable or Free Style Controller to this socket activates the Movie Camera's built-in speaker, but connecting a headphone, etc. deactivates it.
- When plugging the pin plug of the AV Cable or Free Style Controller to this socket, plug it in as far as it goes.

(41) **S-Video Input/Output Socket [S-VIDEO IN/OUT]**



(42) **Flash Sensor**
(43) **USB Socket [USB]**
Edit Socket [EDIT⊜(MINI)]
(44) **Digital Still Picture Terminal**
[DIGITAL STILL PICTURE]
(45) **DV Terminal**
- Connect this to the digital video equipment.

(46) **Lens (LEICA DICOMAR)**
(47) **Microphone (built-in, stereo)**
(48) **Lens Cap String Holder**



(49) **Shoulder Strap Holders**
(50) **Mode Selector Switch [AUTO/MNL/FOCUS]**
(51) **Viewfinder Pull Knob**
(52) **Eyepiece Corrector Knob**
(53) **Grip Belt (Free Style Grip Belt)**
(54) **Tripod Receptacle**
- Used for mounting the Movie Camera on an optional tripod.

	INITIAL/LOGO	ABBREVIATIONS
A	A GND	Analogue GND
	A HASW	Audio Head Amp Switching Pulse
	A HSW	Audio Switching Pulse
	A MUTE	Audio Mute
	A ORP	Audio Overlap Pulse
	A. TR	Auto Tracking
	A0-8, 0-17	Memory Address
	A3V2	AD Converter Reference Voltage
	AB0-4	Address Bus
	AB0-4, AB12-15	Address Bus Line 0-4, 12-15
	ABSF	Focus Encoder Input
	ACI	Analogue Channel Cording IC
	AD	AD Converter
	AD	Auto Date, Analogue Digital Converter
	AD CLK	AD Clock
	AD REC	Audio Delayed REC
	AD0-6	Address
	AD0-6, ADR0-6	Address Data Line
	ADCLK	Analogue Digital Converter Clock
	ADCNT	Analogue Digital Control
	ADCS	Analogue Digital Chip Select
	A-DET	Audio Detect
	ADREC	Audio Delaied Rec
	ADUB	Audio Dubbing
	AE	Auto Expose
	AECNT	Auto Expose Control
	AEE(H)	Audio E-E (H)
	AEH	Audio Erase Head
	AEIRQ	Auto Expose Interrupt Request
	AF/MF	Auto Focus/Manual Focus
	AF DIS CS	AF DIS Chip Select
	A-FADE(L)	Audio Fade (L)
	AF-AMP	AF HALL Bias
	AFCS	Auto Focus Chip Select
	AFRP	Audio PLL Voltage Control
	AF-VN	Zoom Encoder V-Ref (–)
	AF-VP	Zoom Encoder VREF (+)
	AGC	Automatic Gain Control
	AGCCNT	Automatic Gain Control Control
	AGND	Analogue Ground/Audio Ground
	AGS	Anti Ground Shooting
	AH(P) / (R)	Audio Head (Play) / (Record)
	AHASW	Audio Head Amp Switch Pulse
	AHSW	Audio Head Switch Pulse
	AI, AO	Buffer Input, Output
	AIBCK	Bit Clock (to A/D Converter)
	AIDAT	Serial Data (to A/D Converter)
	AILRCK	L/R Clock (to A/D Converter)
	AIMCK	Master Clock (to A/D Converter)
	ALC CNT	Auto Level Control Control
	ALC MAIN	Auto Level Control Drive
	ALE	Address Latch Enable
	A-LOCK	Full Auto Switch
	A-MUT(H)	Audio Mute (H)
	ANLPTH	Analogue Loop Through High
	AORP	Audio Overlap Pulse
	APCNT	Aperture Control
	APS	Auto Power Save
	ART VH	Artifical Vertical Sync
	AT CNT	Automatic Tracking Gain Adjust
	ATF	Automatic Track Finding
	ATFCLK	41.85MHz Clock
	ATFG	Auto Track Gain
	ATL	Auto Lock Select
	ATN	Absolute Track Number
	ATR OFF(H)	Auto Tracking Off (H)
	ATV	Advanced TV
	AUDIO(N)	Audio (Normal)
	AUX	Auxiliary
	AVDD	Analogue VDD
	AVSS	Analogue Ground
	AWTB	Auto White Balance B-Y
	AWTR	Auto White Balance R-Y
B	BACK	Back-up
	BACK UP	Microcomputer Back-up
	BACK VDD	Back-up Power
	BATT	Battery
	BATT ALARM	Battery Alarm
	BATT REF	Reference Voltage for Battery
	BCB	B Carrier Balance
	BCBM(B-Y)	B-Y Carrier Balance
	BCBM(R-Y)	R-Y Carrier Balance
	BD0-7	REC/Play In/Out Buss
	BDCK	Standard Bus Data Clock (9MHz)
	BDEN	Standard Bus Data Enable
	BEND	Data Block End Request
	BF	Burst Flag Pulse
	BFA	Burst Flag Pulse for Encorder
	BFO/BFI	Burst Flug Input/Output
	BI, BO	Buffer Input, Output
	BL	Back Light
	BL ON	Back Light ON (L)
	BL4V	Back Light 4V
	BLC 0, 1	Back Light Y Control Out, In
	BLDI/O	Back Light Drive Input/Output
	BLK	Blanking Pulse
	BLKA	Blanking for Encorder
	BLKA	Blanking Pulse for Encorder
	BLKI/O	Blanking Pulse In/Out

	INITIAL/LOGO	ABBREVIATIONS
	BLKZ	Blanking Pulse for Zoom Encorder
	BM	Balance Modulator
	BQUIET	Bus Out Control Signal
	BUF IN/OUT	Buffer In/Out
	B-Y KB	B-Y Carrier Balance
	B-YO	B-Y Signal Out
C	C A In/Out	Pre-Aperture In/Out
	CAPSTP	Capstan Stop Flag
	C CNT	Colour Control
	C SYNC	Composite Sync Signal
	C/N	Carrier/Noise
	C0-7, C00-07	Chrominance Signal 0-7
	CAGAIN	Aperture Gain Control
	CAM	Camera
	CAM CLK	Camera Clock
	CAM RST	Camera Reset
	CAM SIOC	Camera Serial In/Out Contol
	CAM T	Camera Test
	CAM TL	Capstan Trque Limit
	CAP EC	Capstan Trque Control
	CAP P(H)	Capstan Power On (H)
	CAP R/F/S	Capstan Reverse (H)/Stop (M)/Forward (L)
	CAP SW	Capstan Power Control Switch
	CAPSTP H	Capstan Stop Flag (Stop High)
	CAPVM	Capstan Motor Current
	CAPVS	Capstan Motor Power Control Switch
	CAS	Compresion, Audio Process, Shuffling/Deshuffling
	CAS	Memory Address Strobe (Active Low)
	CASDOWN, DWN	Cassette Down (L)
	CB, CR	Chroma B, Chroma R
	CBLK	Composite Blanking Pulse
	CC	Channel Cording
	CCA	Curent Drive Control
	CCA	Current Control Amp
	CCD	Charge Coupled Devise
	CCW	Counterclockwise
	CD SP0-7	Digital Chroma
	CDS	Correlate Double Sampling Signal
	CDS1, 2	Sampling Pulse for CCD Output Signal
	CE	Chip Enable
	CE	Control Pulse Erase
	CEC	Capstan Error Code
	C-ERA(H)	Control Erase (H)
	CFEM	Chrominance Memory Signal
	CFM	Chrominance Field Memory
	CFM1-4	Chroma Field Memory Signal
	CG CLK	Character Generator Clock
	CG CLK DATA	Clock Generator Data
	CG DATA	Character Generator Data
	CGC	Chrominance Gain Control
	CGCS	Character Generator Chip Select
	CGO	Character Generator Serial Data
	CH	Charge

	INITIAL/LOGO	ABBREVIATIONS
	CH1	Channel 1 (Odd Field)
	CHR	Character
	CHR BACK	Character Back-up
	CHR MIX	Character Mix
	CI, CO	Buffer In/Out
	CI,CO	Buffer Input & Output
	CIF	Control Signal Forward Input
	CIF, CIR	Positive Control Pulse, Negative Control Pulse
	CIR	Control Signal Reverse Input
	CK	Clock
	CL/CLK	Clock
	CLASS	Classeffication Signal for Compress (DCT/VLC)
	CLASS 0.1	Class Control Signal Durring DCT/VLC
	CLK135	13.5MHz System Clock
	CLK18	18MHz System Clock
	CLK2	Clock 2 (824XFH: 12.875MHz)
	CLK246	24.576MHz Clock
	CLK27	27MHz System Clock
	CLK450	450KHz Clock
	CLKDCLK	Digital Clock
	CLK-PH	Clock Phase Control
	CLK-REF	Reference Clock
	CLP-RST-H	Clamp Reset High Signal
	CLX	TFT X-axis Transmission Clock
	CLX, CLX1-4	Shift Clock for X Direction (LCD Panel)
	CLY	Shift Clock for Y Direction (LCD Panel)
	CLY	TFT Y-axis Transmission Clock
	CLY FG	Cylinder FG Signal
	CMEMO0-3	Chroma Memory Output Signal 0-3
	CMIX	Character Mix
	CMO	Chrominance Memory Output
	COMPC	Position Detection Pulse
	COM RDY	Serial Enable Signal
	CMODE	Camera Mode
	CNCLK	Clock
	CNR	Chrominance Noise Reduction
	CNT, CONT	Control
	CO	Control Out
	CO0-7	Chrominance Output 0 to 7 (Digital)
	COM	Common
	COM RDY	Serial Transmission Enable
	COMB	Comb Filter
	COS EQ	Cosin Equalizer
	CP	Clamp Pulse
	CP ON(H)	Camera Power On(H)
	CP2, 20	Clamp Pulse
	CP2A, CP2O	Encoder Clamp Pulse
	CPN	Component Signal
	CPOB	Clamp Pulse for Optical Blanking
	CPS	Composite Signal
	CPV	Gate Scan Clock
	CR OUT	Pre Apature Out
	CR POW SW	Camera Remote Power On Switch
	CRA	Aperture Gain Control

	INITIAL/LOGO	ABBREVIATIONS
	CRA	Pre Apature Gain Control
	CRST	Camera Reset
	CS	Chip Select
	CS 0-7	Chrominance Signal Out 0-7
	CSEL	Clock Phase Select
	CSI 0-7	Chrominance Signal In 0-7
	CTSW	Crosstalk Switch
	CURR	Current
	CW	Clockwise
	CYL EC	Cylinder Motor Trque Control
	CYL PG	Cylinder Motor PG
	CYL VM	Cylinder Motor Current or Power
D	D CLK	Digital Clock
	D MODE	Digital Mode Switch Signal
	D01-03	Zoom 01-03
	DA UV SEL	D/A Convertor U/V Select
	DAC	Digital Analogue Converter
	DAG	Digital Analogue Ground
	DB0-7	Data 0-7
	DB0-7	Microprocessor Data
	DCC	DC Clamp Control
	DCCNT	DC Control
	DCI	Digital Channel Cording IC
	DCLR	Digital Clear
	DCP	Digital Clamp Pulse
	DCS-CLK, DA	CAS & DV I/F Serial Clock
	DC-STP1	DCS Serial Start
	DC-STP2	DCS Serial Stop
	DCT	Discrete Cosine Transform (Compression)
	DCX7	Serial Data
	DEDP 0-3	Playback Data
	DEDR 0-3	Rec Data
	DEMO	Demodulation
	DEMP	A/D Convertor Empahsis Control
	DEMP	De-Emphasis
	DFD 0-7	Encode Data In/Out Between Shaffling Memory
	DFD0-7	Encode Input/Output Signal for Shuffling Memory
	DIBDCK	Bit Clock
	DICLK	Digital Clock
	DIDAT	Serial Data
	DIDAT	Serial Data Durring Digital Audio In
	DIF	Digital Interface
	DILRCK	L/R Clock
	DILRCK	Serial Clock Durring Digital Audio In
	DIMCK	Master Clock
	DIMCK	Mater Clock Durring Digital Audio In
	DIO 1-8	Data In/Out
	DIOS	Data In/Out Select Control Signal
	DIOS	Select Signal for Digital In/Out
	DIS	Digital Image Stabilizer
	DIS R/B	Digital Image Stabilizer Read (H)/Busy (L)
	DIS R/B	DIS IC Rady/Busy
	DIS/KAND	Digital Image Stabilizer/Sensitivity
	DISCS	Dis Chip Select
	DISP	Display
	DL	Delay Line
	DOBCK	Audio A/D Convertor Bit Clock
	DOCTL	Data Output Control Signal
	DODAT	Serial Data (to D/A Converter)
	DOLRCK	Audio A/D Converter LR Clock
	DOLRCK	L/R Clock (to D/A Converter)
	DOMCK	Audio A/D Converter Master Clock
	DOMCK	Master Clock (to D/A Converter)
	DQ 1-16	Memory Data
	DRAM CAS	D-RAM Colum Address Strobe
	DRAM OE	D-RAM Out Enable
	DRAM RAS	D-RAM Read Address Strobe
	DREC	AV Delayed REC Start Pulse
	DRK	Dark (LPF Switch for Auto Focus)
	DS1, 2	Double Sampling Pulse
	DSF 0-7	Data In/Out for Shaffling Memory
	DSF 0-7	Input/Output Data to Shuffling Memory (18MHz)
	DSP	Digital Signal Processor
	DSP R/B	DSP IC Rady/Busy
	DSP-48K-H	DSP IC Clock Select
	DSTB	Data Stobe Signal
	DSV	Digital Sum Variation
	DV	Digital Video
	DVB	Digital Video Broadcast
	DVC	Digital Video Cassette
	DVDD	Digital VDD
	DVIO	Digital Video Input Output
	DVSS	Digital Ground
	DX	Shift Data for X Direction (for LCD)
	DY	Shift Data for Y Direction (for LCD)
	DY	TFT Y-axis Shift Data
	DZ	Digital Zoom
E	E Snap	Electric Snap Shot
	E ZM	Electric Zoom
	E2 CS or E2P CS	EEPROM Chip Select
	E2 R/B	EEPROM Rady/Busy
	E2P	EEPROM
	EARP	Earphone
	EC	Torque Control
	ECC	Error Correction Cording
	ECM	Electric Condencer Mic
	ECR	Reference Voltage for Capstan Torque
	EDA	Error Correction, DCI, ATF Servo
	EE CS	EEPROM Chip Select
	EE R/B	EEPROM Read (H)/Busy (L)
	EEPROM	Electric Erasable Programable Read Only Memory
	EIS	Electric Image Stabilizer (DIS)
	EMP	A/D Convertor Emphasis Control
	ENAB	Enable
	ENV	Enverope
	EOB	End of Block

	INITIAL/LOGO	ABBREVIATIONS
	EQ	Equalizer
	EVF	Electric View Finder
	EXT DC	External DC (AC Adaptor)
	EXT DC(H)	AC Adaptor DC (H)
	EXT NOREG	AC Adaptor 6V
	EXT S DATA	Serial Data for Edit
	EXT SCK	Serial Clock for Edit
	EZOOM	Electric Zoom
F		
	F ENC	Lens F-Value
	FACT MODE	Factry Mode (not used in the service)
	FB	Feed Back
	FC	Saw Tooth Signal In
	FCK	Clock
	FCO	Saw Tooth Signal Generator
	FENC	Focus Encoder
	FEND	Frame End Pulse
	FH2B	FH/2 (15.625KHz / 2=7.8125KHz)
	FIX OSD	Auto Tracking Off (H)
	FLICK	Flicker Output
	FM	Field Memory
	FM0-7	Field Memory 0-7
	FMCO0-3	Field Memory Chrominance Out 0-4
	FMDIR	Focus Motor Direction
	FMOEM	Field Memory Enable
	FMOEO	Field Memory Enable
	FMT1-4	Focus Motor Terminal 1-4
	FMY00-07	Field Memory Luminance Out 0-7
	FMYI0-07	Field Memory Luminance In 0-7
	FNO	F Value
	FPS	Frame Refference Signal
	FR	Capstan Reverse High
	FRP	Frame Refference Pulse
	FRPSO	Frame Start Pulse
G	G1, G2, G3	Gap 1, 2 and 3
	GCA	Gain Control AMP
	GCNT	Gain Control
	G-CNT	AGC Adjustment
	GCTRL	Gain Control
	GENE	Generator
	GF	FG AMP Terminal
	GSW	Ground for Switching Power
H	H/M/N	Hi-Fi / Mix / Normal
	H/N	Hi-Fi / Normal
	H1, 2	H. CCD Drive Pulse
	HAP	Horizontal Aperture
	HASW	Head AMP Switching Pulse
	HB	Hall Bias
	HBR SET	High Brightness Set
	HBRST	High Brightness Set
	HCLR	High Clear
	HCP	Shift Clock for Horizontal Drive

	INITIAL/LOGO	ABBREVIATIONS
	HD	Horizontal Drive Pulse
	HDTV	High Definition TV
	HEX	Hexadecimal
	HG	Hall Gain
	HID	Head Switching Pulse
	HLT	High Bright Signal
	HALL IN(+), (–)	Input Signal from Hall IC
	HP	Headphone
	HPF	High Pass Filter
	HSE	Modulated Data Output
	HSP	Timing Pulse for Shaffling Memory
	HSS	Horizontal Sync Signal
	HSW	Head Switching Pulse
	HS-WT	High Speed Zoom
	HSZ	High Speed Zoom
I	I/F	Interface
	I-2 C	Inter Integrated Circuit
	ID(H)	Wide Television (H)
	IMP	Inter Microprocessor Protocol
	INF	CCD Input Signal 1
	INF	Input Frame Signal
	INS	CCD Input SIgnal 2
	INTER	Interval Recording
	INV	Inverter
	IOU	R-Y Analogue Signal Output
	IOV	B-Y Analogue Signal Output
	IOY	Y Analogue Signal Output
	IR	Infrared Rays
	IRDET	Imfrared Ray Detection
	IREF	Current Adjustment Terminal
	IRIS/SH	Iris / Shutter Control
	IRQ	Interrupt Request
	ITI	Insert & Track Information
J	JPEG	Joint Photographic Image Cording Experts Group
K	KANDO	Digital Gain Up
	KB	Carrier Balance
	KEY IN	Key Scan
	KND	Digital Gain Up
	KNEE	Luminance Compensate
L	LCD	Liquid Crystal Display
	LCD P(L)	LCD Power On (L)
	LD	Load Pulse
	LDD	Liquid Direct Drive
	LEDCNT	LED Control
	LI-BATT	Lithium Battery
	LOAD	Loading
	LOAD F, R	Loading Direction (F: Forward / R: Reverse)
	LPF	Low Pass Filter
	LRMONO	Monoral Audio (L + R)
	LSB	Least Significant Bit

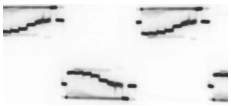
INITIAL/LOGO		ABBREVIATIONS
	LVL	LPF Switch for Auto Focus
M	M1-3	Motor Coil Terminal 1 to 3
	MA0-5	Microprocessor Address Data 0-5
	Mbps	Megahertz Bit Per Second
	MD	Modulation
	MD0-7	Microprocessor Data 0-7
	MDT0-7	Microprocessor Data 0-7
	ME (TAPE)	Metal Evaporated (Tape)
	MENB	Focus Motor Enable
	MFF	Manual Focus Far
	MFN	Manual Focus Near
	MHSYNC	Monitor Horizontal Sync Signal
	MIC	Memory In Cassette
	MIG	Meta In Gap
	MIX N.R.D.	Non Rec Data Mix
	MOD	Modulation
	MOUT	Mic Out
	MP (TAPE)	Metal Particle (Tape)
	MPEG	Moving Picture Image Cording Experts Group
	MPEG2	Moving Picture Image Cording Experts Group Phase 2
	MRST	Focus Motor Reset
	MSB	Most Signal Bit
	MVSYNC	Monitor Vertical Sync Signal
N	N/F	Near/Far Focus
	N/P	NTSC/PAL
	NB1-3	Base for NPN Transistor
	NC	No Connection
	NC1-3	Corrector of NPN Transistor
	NCLR	Power On Reset
	NCP1	Clamp Pulse
	NCP2+VDH	Clamp Pulse + Horizontal Drive Pulse
	NCP2+VDM	Clamp Pulse + Gate Pulse
	NDE	Non Liner De-Emphasis
	NE	Emitor of NPN Transistor
	NLE	Non Liner Emphasis
	NR	Noise Reduction
	NRD	Non Rec Data
	NRD BLK	Non Rec Data Blanking
	NRD CLK	No Rec Data Clock
	NRE	Read Enable Input (Low Active)
	NWE	Write Enable (Low Active)
O	OB	Optical Black
	OBCNT	Optical Black Control
	OBREF	Reference Voltage for Optical Black Control
	OE	Output Enable
	OFH	Horizontal Counted Down Clock Signal (Reference)
	OFS	Offset
	OP	Operation AMP Output
	OSD	ON Screen Display
	OVL	Overlap Pulse
	OZ	Optical Zoom

INITIAL/LOGO		ABBREVIATIONS
P	P SW	Power Switch
	PB1-3	PNP Base 1-3
	PBCTL	Play Back Control
	PBCTL	Pre-Branking Control
	PBH	Head Amp Switch
	PBLK	Pre-Blanking (Pulse)
	PC1-3	Corrector of PNP Transistor
	PCBM	Carrier Balance
	PCH	Phase Compensator (Hall AMP)
	PCI	Phase Compensator (Current)
	PCO	Phase Compensator Out
	PCS	Switching Power Control
	PCV	Phase Compensator (Voltage)
	PE	Emitter of PNP Transistor
	PED	Pedestal
	PEDECNT	Pedestal Control
	PENO	Alarm (L)
	PFP	Pilot Frame Position
	PGA, B	Power Ground A, B
	PGC	Pulse Generator Comparator
	PGI	Pulse Generator Input
	PGMM	Pulse Generator Monostable Multivibrator
	PGO	Output of Pulse Generator AMP
	PMODE	Select Signal for Normal / Wide Screen
	PON	Power On
	POR	Power On Reset
	POSCOM	Common Position
	PREAMP	Pre-AMP
	PREBLK	Pre-Blanking
	PT	Protect for V Voltage
	PWM	Pulse Width Modulation
	PWMB	Pulse Width Modulation Pulse
Q	Q2H	Source Output Select
R	R CTL P	Recorded Control Pulse (+)
	R CTL R	Recorded Control Pulse (–)
	R/B	Read/Busy
	R/L	Direction Control for Data Transmition
	RA	Recording AMP
	RA1	Rec AMP 1
	RAC AC	Rec Audio Current
	RAD	Read Address Data
	RAE	Read Address Enable
	RB	Read Busy
	R-B	R Bias
	RCB	R Carrier Balance
	RE	Read Enable
	RE(F), (S)	Rotary Erase Head Transformer
	REB	R Bias
	REC CC	Rec Current Control
	REC CCNT	Rec Current Control
	RECCTRL	Recording Control Pulse
	RECI	Rec Amp Switch

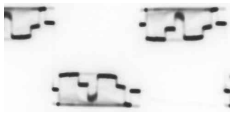
INITIAL/LOGO		ABBREVIATIONS
	RENCF	Lens Control (Forward)
	RENCR	Lens Control (Reverse)
	RERASE	Rotary Erase Head
	RGBIV1-2	1V Inverted Signal 1-2
	RGO R/G OFF	Offset Voltage for AWT R
	RSF	Capstan Direction (Reverse / Stop / Forward)
	RST	Reset
	RSTB	R Strobe
	RSTPWD	Reset Power Down Input
	RSTR	Reset Read
	RSTW	Reset Write
	RT	Saw Tooth Terminal
	RVCO	Resister for Oscillation
	RW	Read Write
	RWAE	Read Write Enable
S	S PHOT	Supply Photo Transistor
	S/H	Sampling Hold
	S/S	Start/Stop
	SBD	Serial Data
	SBI	Serial Data Input
	SBO	Serial Data Output
	SBT	Serial Clock
	SCAN0-5	Key Scan 0-5
	SCK	Serial Clock
	SCR	Search
	SCR, S.C.R.	Still Cue Review
	SEG.	Segment
	SET	White Balance Set
	SH/IRIS	Shutter/Iris Control
	SHIFT	Capasitor for Phase Shift
	SI	Serial Data Input
	SIC	Shift In Clock Input
	SIOC	Serial In/Out Control
	SMCE	Shaffling Memory Chip Enable
	SMRS	Shaffling Memory Read Strobe
	SMWE	Shaffling Memory Write Enable
	SMWS	Shaffling Memory Read Strobe
	SNAP	Snap Shot
	SNS LED	Sensor LED
	SO	Serial Data Output
	SPA	ATF Smapling Pulse
	SPEN	8 Bit Shift Register Enable
	SPK	Speaker
	SPO	Reset for Switcing Power
	SPST	8 Bit Shift Register Strobe
	SREELP	Supply Reel Pulse
	SRT	Start
	SSA	Start Sync block Area
	SSW	Select Signal for Low Pass Filter
	ST5V	Safety Tab 5V
	STAB	Safety Tab Switch
	STB	Stand by Signal
	STB	Strobe
	SWB	Switching Pre-Drive Pulse
	SYL EC	Cylinder Torque Control
	SYL FG	Cylinder FG
T	T PHOT	Take-up Photo Transistor
	TBC	Time Base Conntrol
	TFT	Thim Film Transistor
	TH	Thermostat for Battery
	TI	Test Mode Select
	TL	Torque Limit
	TM	Sub Code
	TMD	Sub Code Data
	TRE	Tracking Error Signal
	TREEL(P)	Take-up Reel (Pulse)
	TRFIX	Tracking Fix
	TRIWAVE	Tracking Wave
	TRP	Tracking Position
	TRP	Trap
	TSR	Head Switching Refference
	TST	Time Scale Transfer
U	U/V SEL	R-Y/B-Y Select Signal
	UNLOAD	Un-Loading
	UNRE	Microprocessor Read Enable
	UNWE	Microprocessor Write Enable
	UV	R-Y/B-Y
	UV SEL	R-Y/B-Y Select Signal
V	V1-V4	V. CCD Drive Pulse
	VB	VH Filter Switching
	VCE	Power Terminal
	VCNTL	Video Control
	VCO	Voltage Control Oscillator
	VCP	Shift Clock Output for Vertical Drive
	VCTLD	Video Control
	VCTRL	Voltage Charge Control
	VD	Vertical Drive Pulse
	VDDX	X Drive Power for Colour LCD
	VDDXY	XY Drive Power for Colour LCD
	VDDY	Y Drive Power for Colour LCD
	VDREC	Video Delayed Rec
	Vgg	Voltage for Gate IC
	Vgl	Gate off Voltage
	VID	Video Signal Out
	VIN	Video In
	VITC	Vertical Interval Time Code
	VITERBI	One of Signal Detection Method
	VL	Low Voltage
	VLC	Variable Length Cording
	VLOCKP	Artificial Sync Pulse
	VLP	Artificial Sync Pulse
	VM	Motor Voltage
	VMD	Velocity Mode Data
	VMD1-3	Electric Shutter Mode

INITIAL/LOGO		ABBREVIATIONS
	VMODE	NTSC/PAL Select Switch
	VMVH	VH Filter Switching
	VORP	Video Overlap
	VRB	Voltage Refference Bottom
	VRBS	Voltage Refference Bottom Output
	VREF1R3V	Refference Voltage 1.3V
	VREF3R3V	Refference Voltage 3.3V
	VREFH	Refference Voltage High Side
	VREFL	Refference Voltage Low Side
	VRI	Refference Voltage Input
	VRO	Refference Voltage Output
	VRT	Voltage Refference Top
	VRTS	Voltage Refference Top Output
	VS	Switching Comparator
	VSS	Vertical Sync Signal
	VSSX	X Driver Power for Colour LCD
	VSSXY	X-Y Driver Power for Colour LCD
W	W/N	Mode Select for Window Mode
	W/N	Wide / Normal
	WAD	Write Address Enable
	WAE	Write Address Enable
	WAERAE	Write Address Enable
	WARI	Interrupt
	WB	White Balance
	WE	Write Enable
	WEM	Memory Write Enable
	WHD	Wide Horizontal Drive Pulse
	WIDE A	Wide Zoom
	WSB	B AGC Control
	WSR	R AGC Control
	WTV	Wide TV
X	XP	FG Logic Reset
Y	Y FM0-7	Y Field Memory 0-7
	YCE	Cylinder Error Code
	YGC	Y Gain Control
	YMO 0-7	Y Field Memory 0-7
	YNCST	Noize Canceller
	YNR	Luminance Noise Reduction
	YSDP 0-7	Digital Y Out 0-7
Z	Z.ENC	Zoom Encoder
	Z.MIC	Zoom Mic
	ZENC	Zoom Encoder Output
	ZMDIR	Zoom Drive
	ZMEN	Zoom Enable
	ZMT	Zoom Motor Tele Side
	ZMT (+)/(–)	Zoom Motor (+)/(–)
	ZMTER	Zoom Motor Tele Side
	ZMW	Zoom Motor Wide Side
	ZSW	Zoom Switch

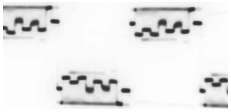
INITIAL/LOGO	ABBREVIATIONS



FP801-2 REC/PLAY
8.0Vp-p (20usec.div.)



FP801-3 REC/PLAY
8.0Vp-p (20usec.div.)



FP801-4 REC/PLAY
8.0Vp-p (20usec.div.)

IC901-5 REC/PLAY
2.7Vp-p (20usec.div.)

IC901-10 REC/PLAY
3.0Vp-p (20usec.div.)

IC901-32 REC/PLAY
9.0Vp-p (20usec.div.)

IC901-34 REC/PLAY
9.0Vp-p (20usec.div.)

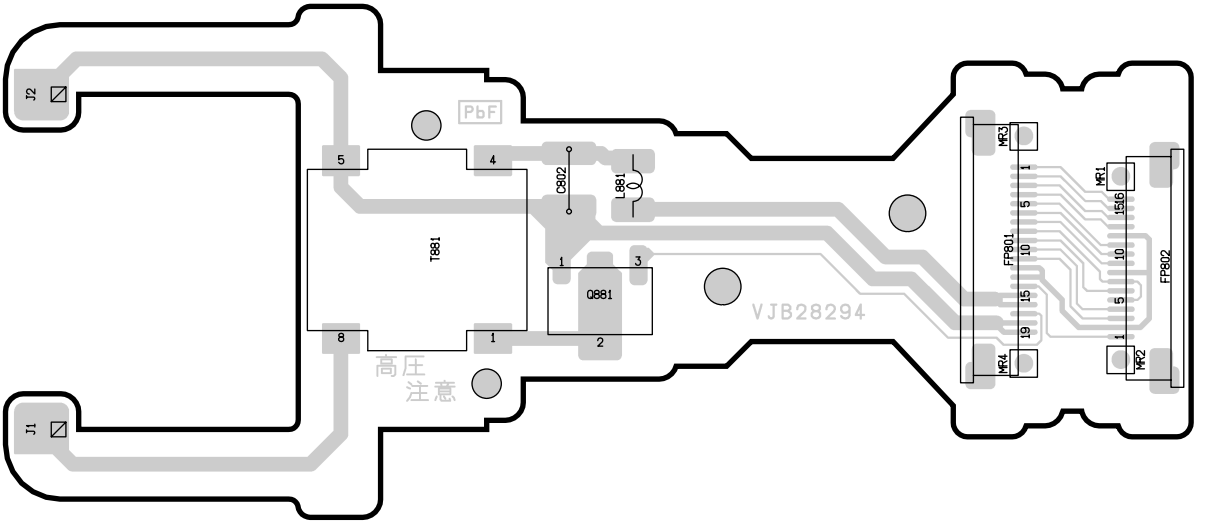
IC901-36 REC/PLAY
9.0Vp-p (20usec.div.)

IC901-70 REC/PLAY
0.5Vp-p (20usec.div.)

IC901-71 REC/PLAY
0.5Vp-p (20usec./div.)

IC901-72 REC/PLAY
0.6Vp-p (20usec./div.)

(VEP28294A)



NV-GX7EG/EGM/B/EN/A/ENT
EVF C.B.A.

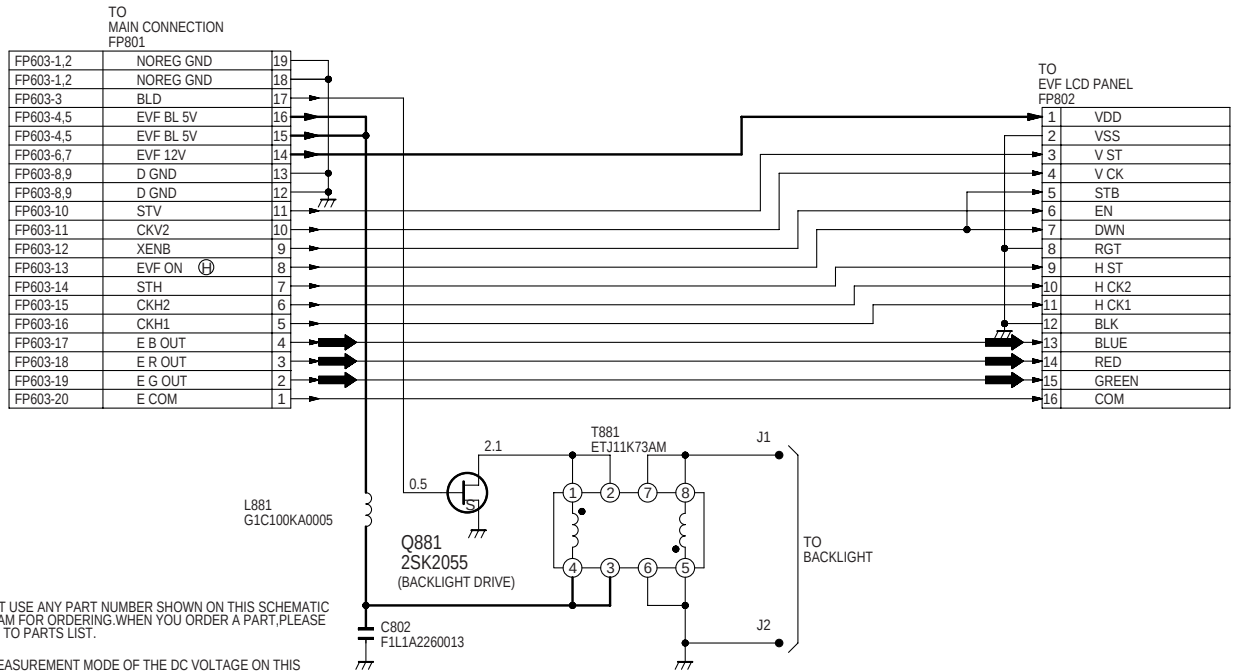
B

A

1 2 3 4 5

(EVF C.B.A.)

:VIDEO MAIN SIGNAL PATH



NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

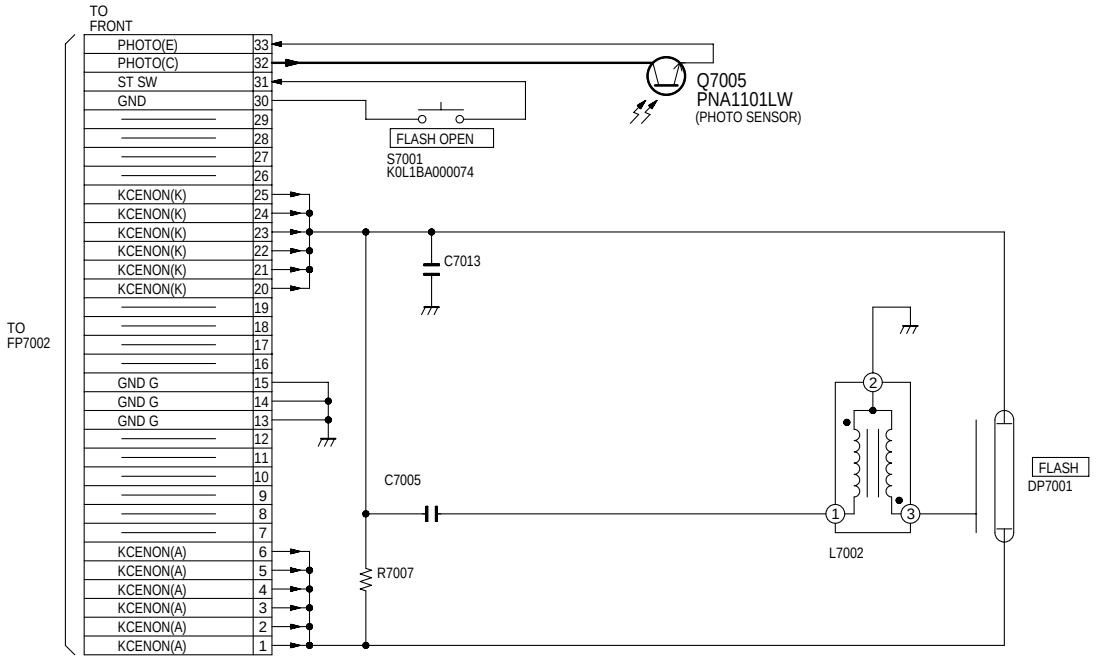
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE. (EVF: ON)

NV-GX7EG/EGM/B/EN/A/ENT
EVF SCHEMATIC DIAGRAM

C B A

1 2 3 4

(FLASH FLEX.CARD)



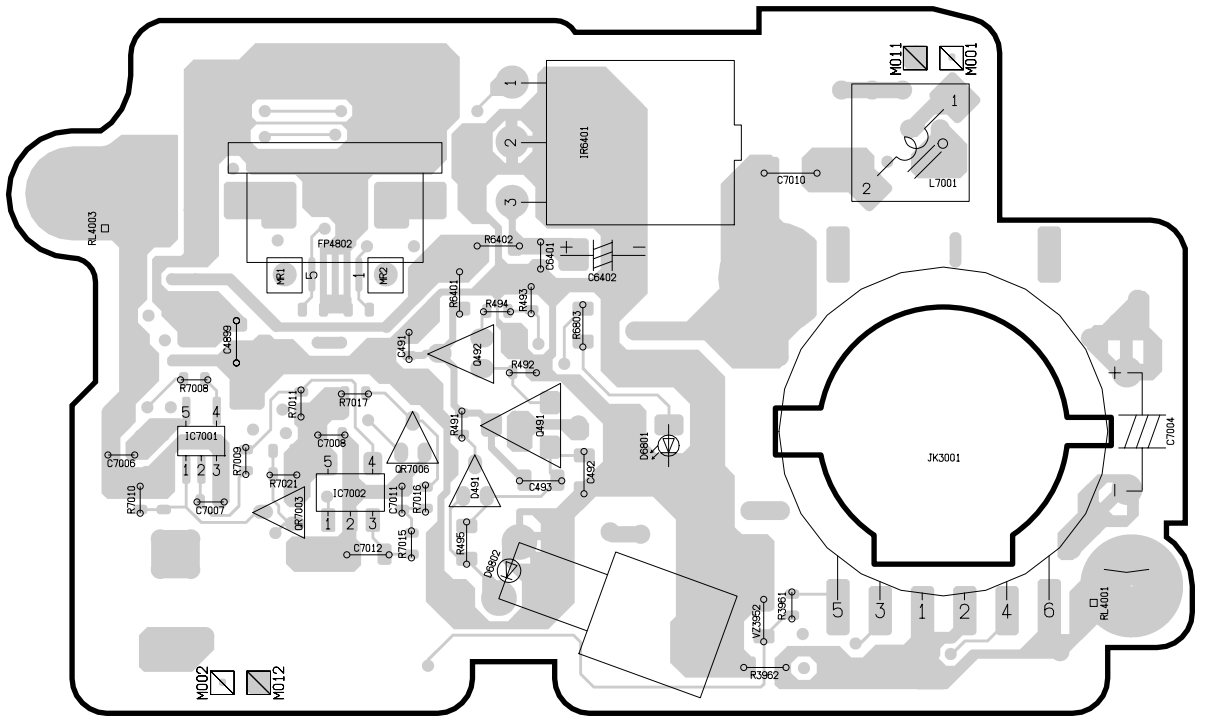
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-GX7EG/EGM/B/EN/A/ENT
FLASH FLEX. UNIT SCHEMATIC DIAGRAM

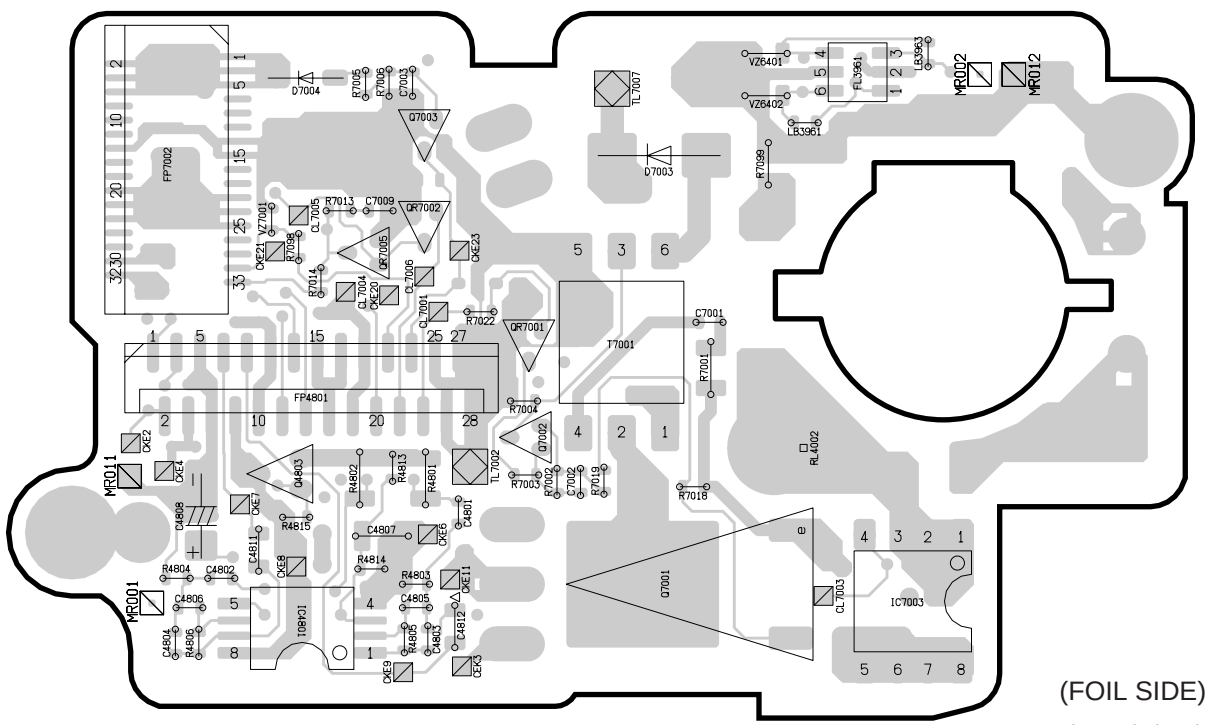
(VEP04808A)

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.



(COMPONENT SIDE)



(FOIL SIDE)

NV-GX7EG/EGM/B/EN/A/ENT
FRONT C.B.A.

:VIDEO MAIN SIGNAL PATH
:AUDIO MAIN SIGNAL PATH

(FRONT C.B.A.)

TO FLASH FLEX. FP7002

PHOTO(E)	33
PHOTO(C)	32
ST SW	31
GND	30
KCENON(K)	25
KCENON(K)	24
KCENON(K)	23
KCENON(K)	22
KCENON(K)	21
KCENON(K)	20
GND G	15
GND G	14
GND G	13
KCENON(A)	6
KCENON(A)	5
KCENON(A)	4
KCENON(A)	3
KCENON(A)	2
KCENON(A)	1

L7001 G1C560MA0024
R7014 1200
VZ7001 D4ED1270A003
R7098 1K
T7001 G5DYA0000033
R7001 33
C7001 0.022
Q7001 B1BDDG000001 (SWITCHING)
C7010 16V1
R7018 680
D7003 B0ECKT000001
TL7007
R7019 22
D7004 MAZU3000LL
R7005 330K
C7002 0.001
R7002 39K
Q7002 2SB1462-R (POWER CONTROL)
Q7003 B1ABBE000002 (POWER CONTROL)
R7003 2200
QR7001 UN921F (INV.)
R7004 8200
C7003 0.01
R7006 560K
R7022 1K
C7004 F2AZZ7500003
IC7003 B1JBLP000004
CL7003
R7008 33
IC7001 C0JBAA000099
R7021 3300
QR7003 B1GDBEHH0001 (INV.)
R7011 56K
C7008 0.01
R7017 3300
R7009 100
IC7002 C0BBAZ000003
R7015 12K
R7016 15K
QR7006 UN921F (INV.)
C7012 0.33
C7011 0.1
C7006 0.1
C7007 0.01
R7010 10K
R7013 560
C7009 0.047
QR7005 UNR9210J0L (INV.)
CL7005
QR7002 B1GBBEMM0001 (INV.)
CL7006
CL7001
TALLY D6801 B3AAB0000129
R6803 330

FP4801

1	TALLY
2	IR OUT
3	REMOTE CTL
4	D 5V
5	MIC GND
6	MIC GND
7	MIC(L)
8	MIC 5V
9	MIC(R)
10	D GND
11	D GND
12	SC I/O
13	SPLUG
14	SV I/O
15	ST NOREG
16	ST NOREG
17	ST NOREG
18	REG 5V
19	REG 5V
20	FDAC
21	ST SW
22	TRIGEND
23	CHAEND
24	CHARGE
25	NOREG GND
26	NOREG GND
27	NOREG GND
28	NOREG GND

TO MAIN CONNECTION FP6505
TO SUB CONNECTION FP4002
CL7004
C4899 1
R7099 0

MIC UNIT
ECM(R)
M4801 WM-58A112A
ECM(L)
M4802 WM-58A112A
FP4802

ECM(R)	5
ECMGND	4
ECMGND	3
ECMGND	2
ECM(L)	1

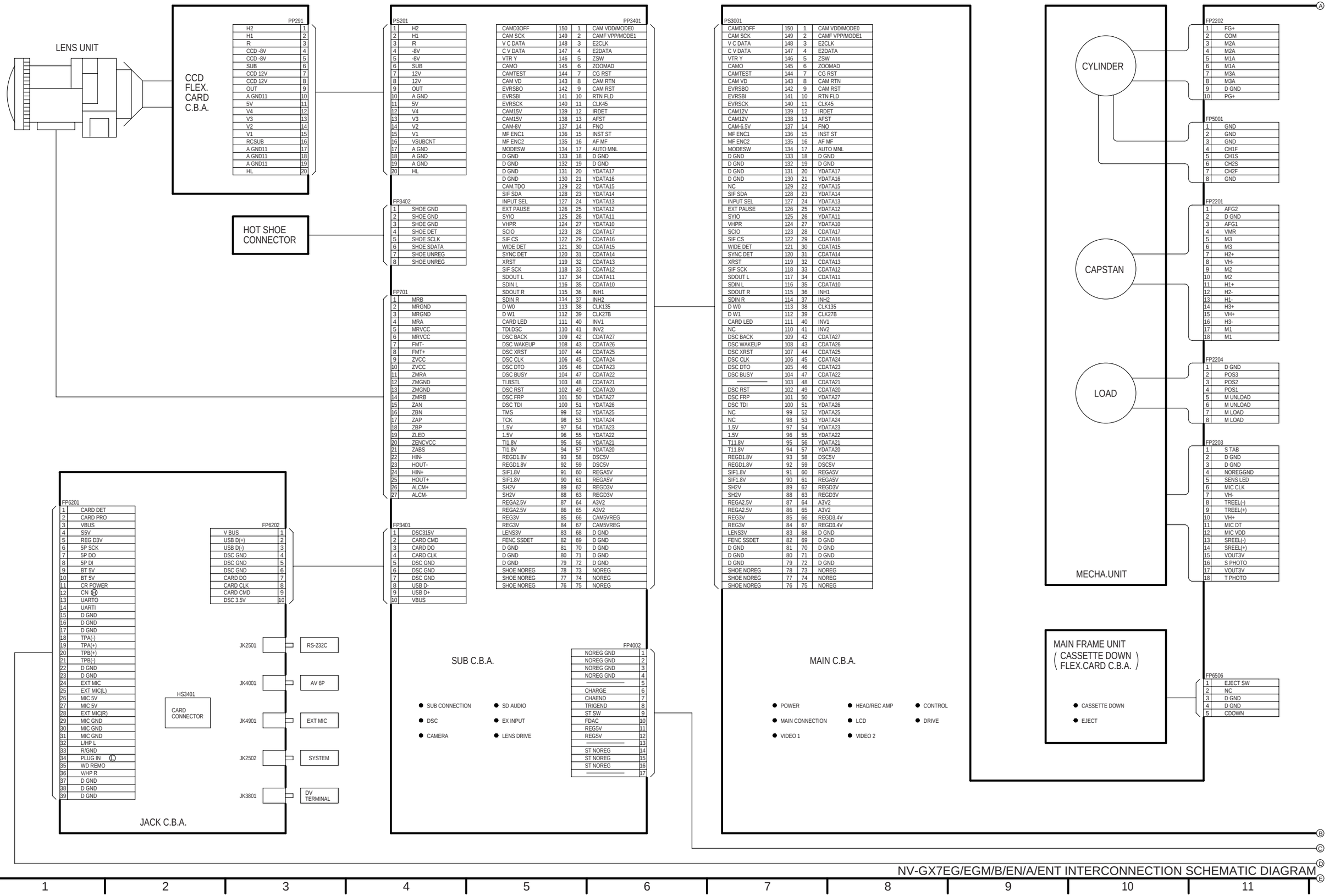
R4801 3900
R4802 3900
C4801 0.01
C4803 3300P
C4805 0.01
R4805 390K
R4803 68K
C4812 1
R4813 22K
Q4803 2SD1819A0L (REG.5V)
R4815 4700
C4808 F3F0J4760002
IC4801 C0ABBB000106
GND
VCC
C4807 4.7
R4814 33K
C4802 0.01
C4806 0.01
R4806 390K
C4811 1
R4804 68K
C4804 3300P

R3961 1K
JK3001 K2HZ104D0001
S-VIDEO IN/OUT
LB3963 J0JBC0000042
LB3961 J0JBC0000042
VZ3952 D4ED1120A002
VZ6401 D4ED1270A008
VZ6402 D4ED1270A008
D6802 B3GA0000022
IR SENSOR
C491 0.1
C493 0.22
R495 10M
Q491 2SD1030 (AMP)
R491 2.2M
D491 MA3S132D
C492 0.22
Q492 2SD1819AR (AMP)
R494 1800
R492 330K
R493 4700
R6401 0
IR6401 PNA4618M05VT (IR RECIEVER)
VCC
GND
OUT
C6401 0.1
C6402 6V22
R6402 47
TL7002
RL4003
RL4002
RL4001
TO FRAME GND

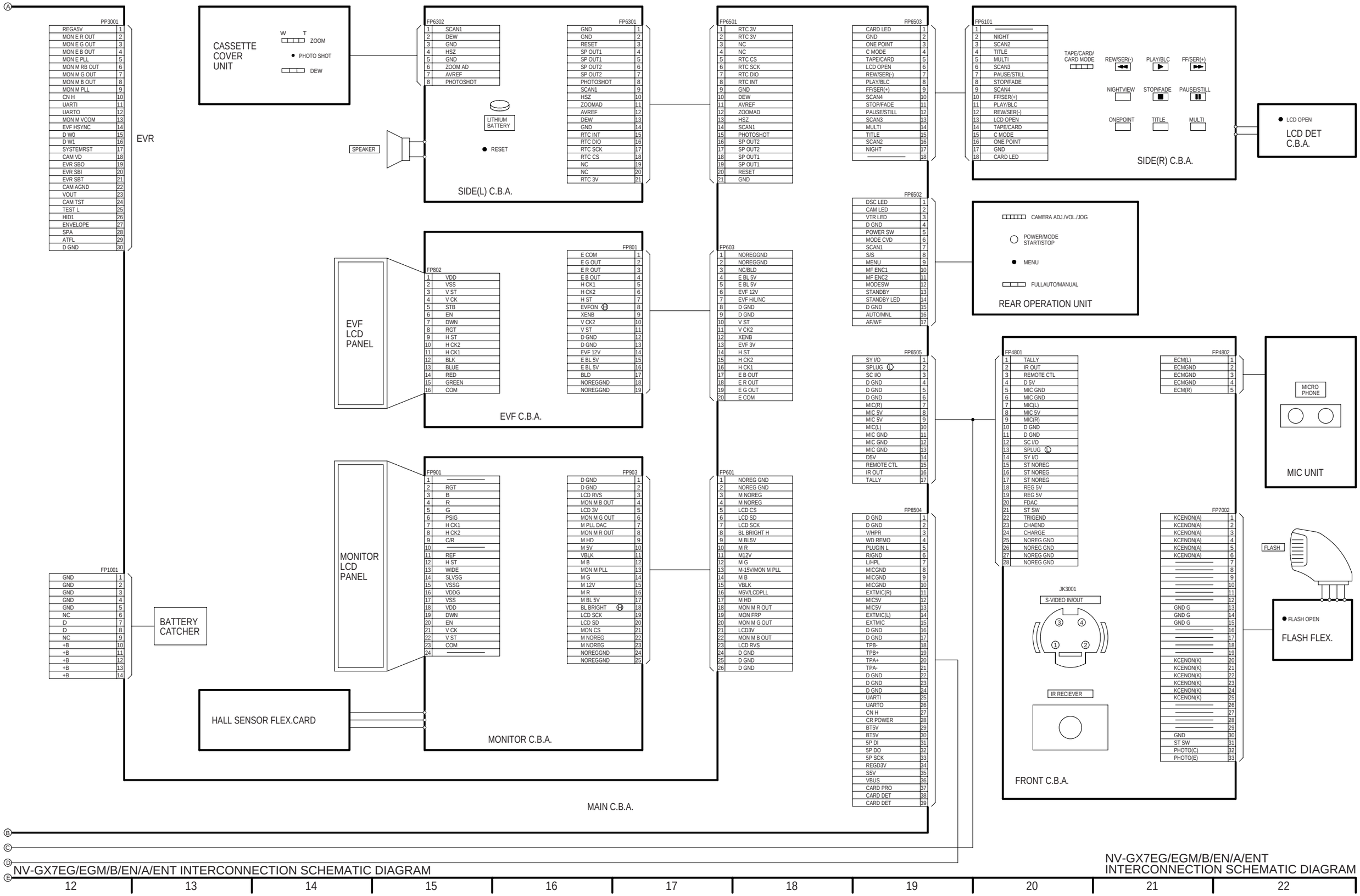
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.
(SP MODE)

NV-GX7EG/EGM/B/EN/A/ENT
FRONT & MIC UNIT SCHEMATIC DIAGRAM



NV-GX7EG/EGM/B/EN/A/ENT INTERCONNECTION SCHEMATIC DIAGRAM



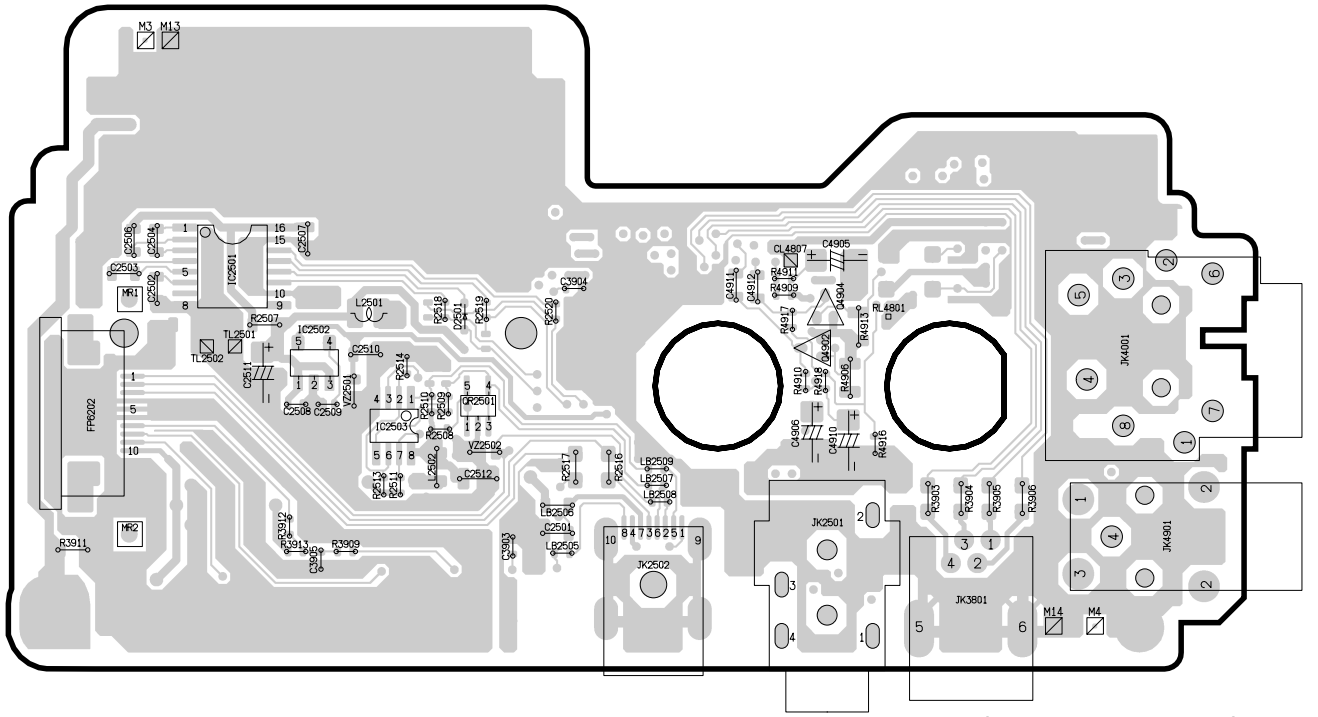
NV-GX7EG/EGM/B/EN/A/ENT INTERCONNECTION SCHEMATIC DIAGRAM

NV-GX7EG/EGM/B/EN/A/ENT INTERCONNECTION SCHEMATIC DIAGRAM

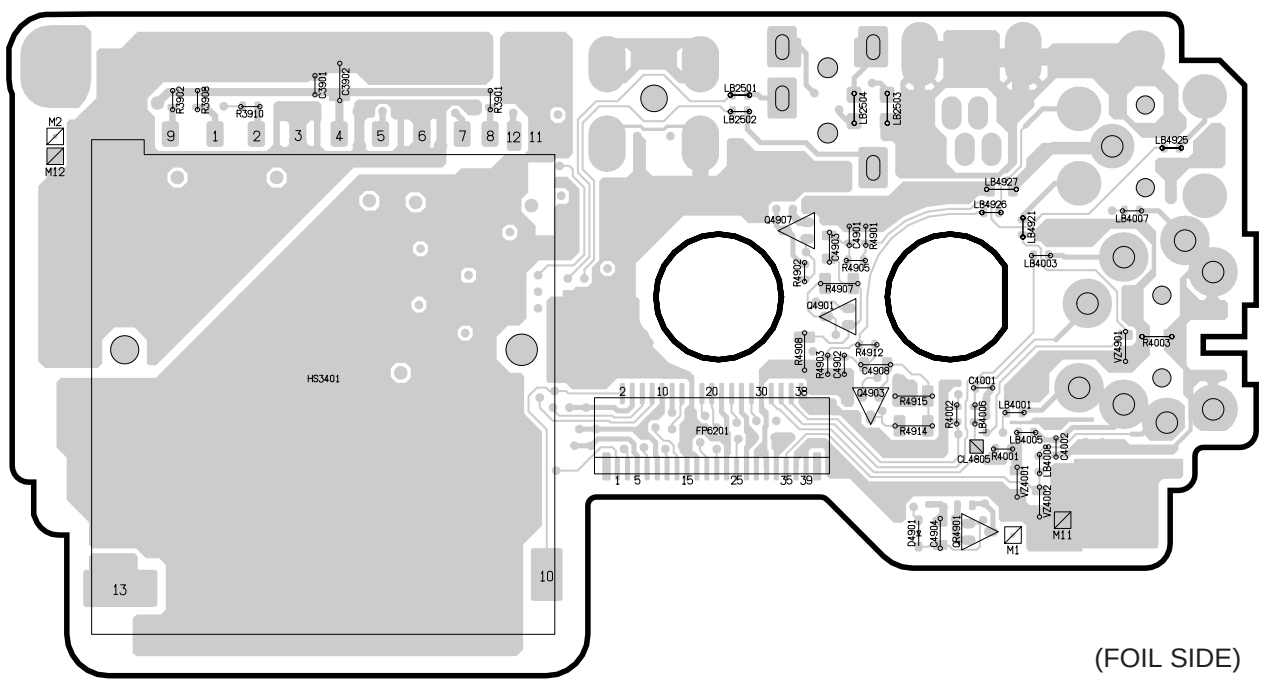
(VEP04809B)

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.



(COMPONENT SIDE)



(FOIL SIDE)

NV-GX7EG/EGM/B/EN/A/ENT
JACK C.B.A.

(JACK C.B.A.)

:VIDEO MAIN SIGNAL PATH
:AUDIO MAIN SIGNAL PATH

EXT-MIC
JK4901
K2HC103B0137

LB4927 J0JHC0000032
LB4926 VLP0329A241
LB4925 VLP0329A241
LB4921 J0JAC0000014

R4905 470
C4903 1
R4901 6800
C4901 2200P
R4906 10K
R4907 150K
Q4901 2SD2216J0L (AMP)
R4908 56K
R4909 1K
Q4902 2SB1462-R (AMP)
R4910 5600
R4911 150
C4905 6V22
C4911 1

R4912 470
C4908 1
R4903 6800
C4902 2200P
R4913 10K
R4914 150K
Q4903 2SD2216J0L (AMP)
R4915 56K
R4916 1K
Q4904 2SB1462-R (AMP)
R4917 5600
R4918 150
C4910 6V22
C4912 1

Q4907
B1ABBE000002
(REG.5V)
R4902 4700
C4906 6V22

QR4901
UNR9113
(SWITCHING)
C4904 1
VZ4901 D4ED12710002

DV TERMINAL
JK3801
K2YZ04000016

TPB(-)
TPB(+)
TPA(-)
TPA(+)
R3903 0
R3904 0
R3906 0
R3905 0

USB/MINI SYSTEM
JK2502
K2HZ108B0004

5P SW
5P GND
5V
USB DATA+
5P DATA
USB V BUS
5P CLK
USB DATA-

LB2505 J0JAC0000014
LB2506 J0JHC0000032
LB2507 J0JAC0000014
LB2508 J0JAC0000014
LB2509 J0JAC0000014
R2516 0
R2517 0
VZ2502 D4ED1220A006

C2501 0.047
R2508 4700
R2509 2700
C2512 4.7
R2510 2700
R2511 47K
R2513 10K
C2511 F3F0J4760002
R2514 22K

QR2501
B1GFCFGN0004
(INV.)

IC2503
NJM2407R
VCC
GND

C2508 0.1
R2507 0
C2507 1
R2520 100
R2519 100
D2501 MA2S728
R2518 0
IC2502
C0CBCBC00037
C2509 0.1
C2506 0.1

IC2501
C0ZBZ0000540
VCC GND T1 OUT R1 IN R1 OUT T1 IN T2 IN R2 OUT
C1+ V+ C1- C2+ C2- V- T2 OUT R2 IN
C2504 0.1
C2503 0.1
C2502 0.1

D4901 MA2SD2400L

232C
JK2501
VJJ0580

LB2503 J0JBC0000026
LB2501 J0JAC0000014
LB2502 J0JAC0000014
LB2504 J0JBC0000026

C2510 1
VZ2501 D4ED1120A002

R4003 0

AV IN/OUT PHONE
JK4001
K2HC107B0002

LB4003 J0JAC0000014
LB4006 J0JAC0000014
LB4001 J0JBC0000042
LB4005 J0JAC0000014
LB4008 J0JAC0000014
LB4007 J0JAC0000014

CL4805
R4002 0
CL4807
R4001 100
VZ4001 D4ED12710002
VZ4002 D4ED12710002

C4002 4700P
C4001 4700P

C3904 0.1
C3903 0.1

R3912 22
R3901 47K
R3913 4700
R3909 22
R3910 0
R3908 330
R3902 47K
C3905 SP
C3901 0.1
C3902 4.7

CARD CONNECTOR
HS3401
K1NA09E00024
WP
GND
C.DET
D1 D0 VSS CLK VDD VSS CMD D3 D2
R3911 0

RL4801
TL2501
TL2502

TO FRAME GND

L2502 G1C100K00019
L2501 G1C4R7M00016

TO MAIN CONNECTION FP6201

1	CARD DET	FP6504-38,39
2	CARD PRO	FP6504-37
3	V BUS	FP6504-36
4	S 5V	FP6504-35
5	REG D3V	FP6504-34
6	5P SCK	FP6504-33
7	5P DO	FP6504-32
8	5P DI	FP6504-31
9	BT 5V	FP6504-30
10	BT 5V	FP6504-29
11	CR POWER	FP6504-28
12	CN (+)	FP6504-27
13	UARTO	FP6504-26
14	UARTI	FP6504-25
15	D GND	FP6504-24
16	D GND	FP6504-23
17	D GND	FP6504-22
18	TPA(-)	FP6504-21
19	TPA(+)	FP6504-20
20	TPB(+)	FP6504-19
21	TPB(-)	FP6504-18
22	D GND	FP6504-17
23	D GND	FP6504-16
24	EXT MIC	FP6504-15
25	EXT MIC(L)	FP6504-14
26	MIC 5V	FP6504-13
27	MIC 5V	FP6504-12
28	EXT MIC(R)	FP6504-11
29	MIC GND	FP6504-10
30	MIC GND	FP6504-9
31	MIC GND	FP6504-8
32	L/HP L	FP6504-7
33	R/GND	FP6504-6
34	PLUG IN (L)	FP6504-5
35	WD REMO	FP6504-4
36	V/HP R	FP6504-3
37	D GND	FP6504-1,2
38	D GND	FP6504-1,2
39	D GND	FP6504-1,2

TO SUB CONNECTION FP6202

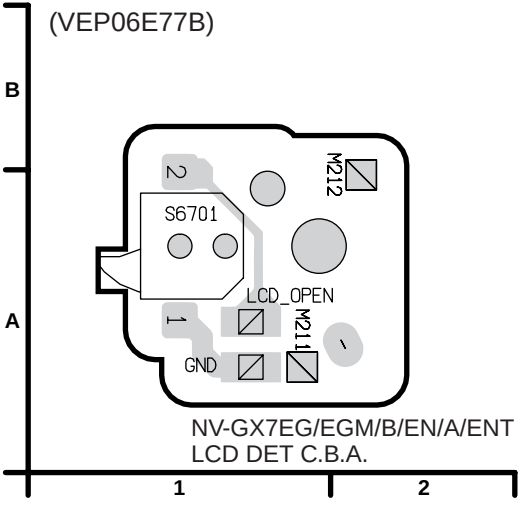
1	V BUS	FP3401-10
2	USB D(+)	FP3401-9
3	USB D(-)	FP3401-8
4	DSC GND	FP3401-7
5	DSC GND	FP3401-6
6	DSC GND	FP3401-5
7	CARD DO	FP3401-4
8	CARD CLK	FP3401-3
9	CARD CMD	FP3401-2
10	DSC 3.5V	FP3401-1

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

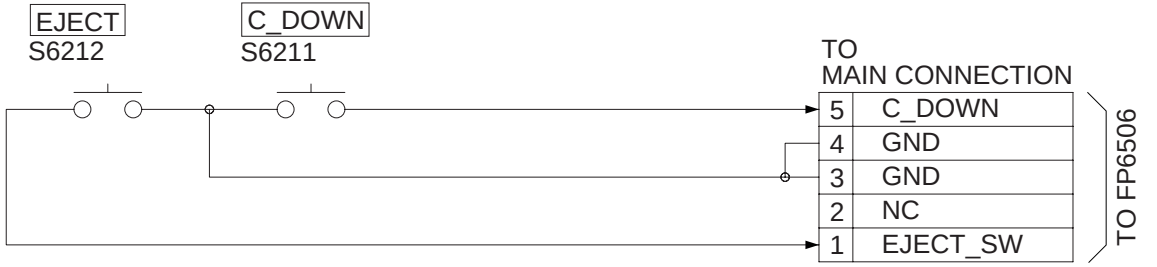
NV-GX7EG/EGM/B/EN/A/ENT
JACK SCHEMATIC DIAGRAM

(VEP06E77B)



NV-GX7EG/EGM/B/EN/A/ENT
LCD DET C.B.A.

(MAIN FRAME UNIT CASSETTE DOWN FLEX.CARD C.B.A.)

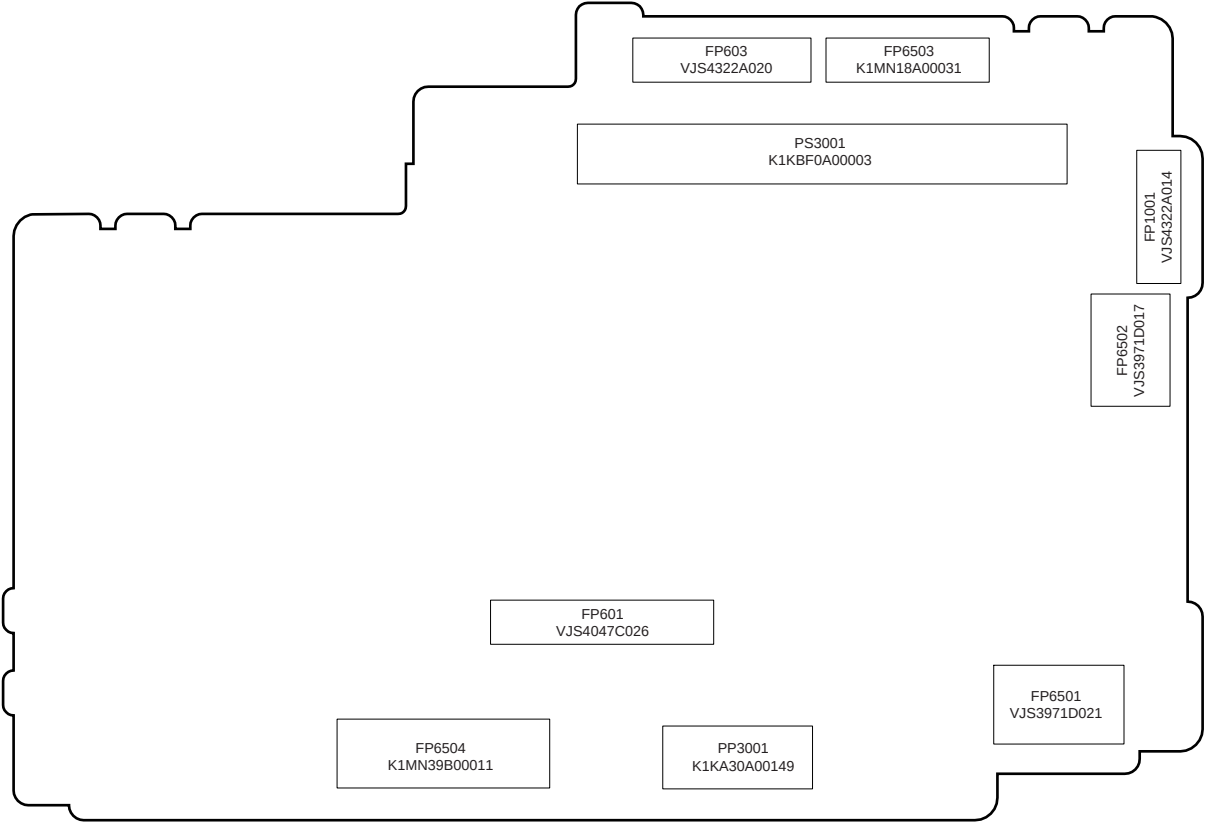


NV-GX7EG/EGM/B/EN/A/ENT
MAIN FRAME UNIT
(CASSETTE DOWN FLEX. CARD)
SCHEMATIC DIAGRAM

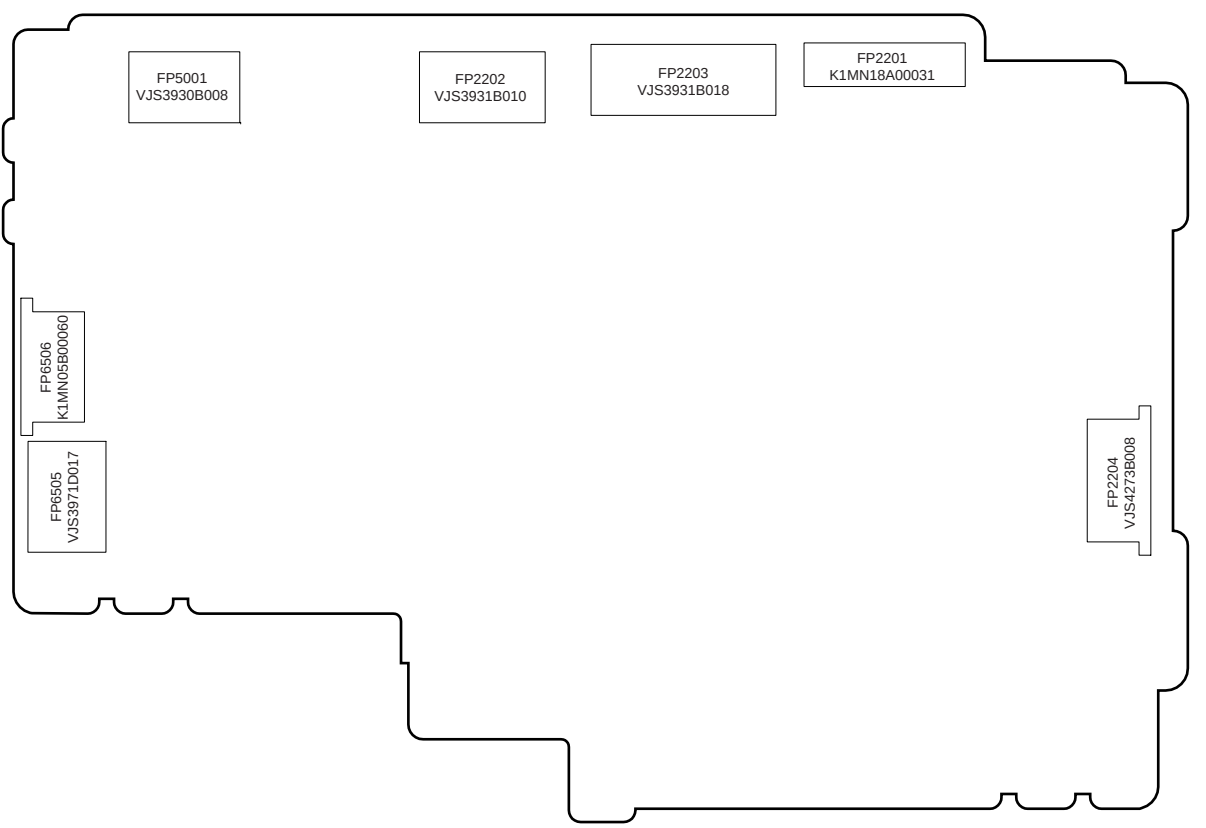
B

A

1 2 3 4



(COMPONENT SIDE)



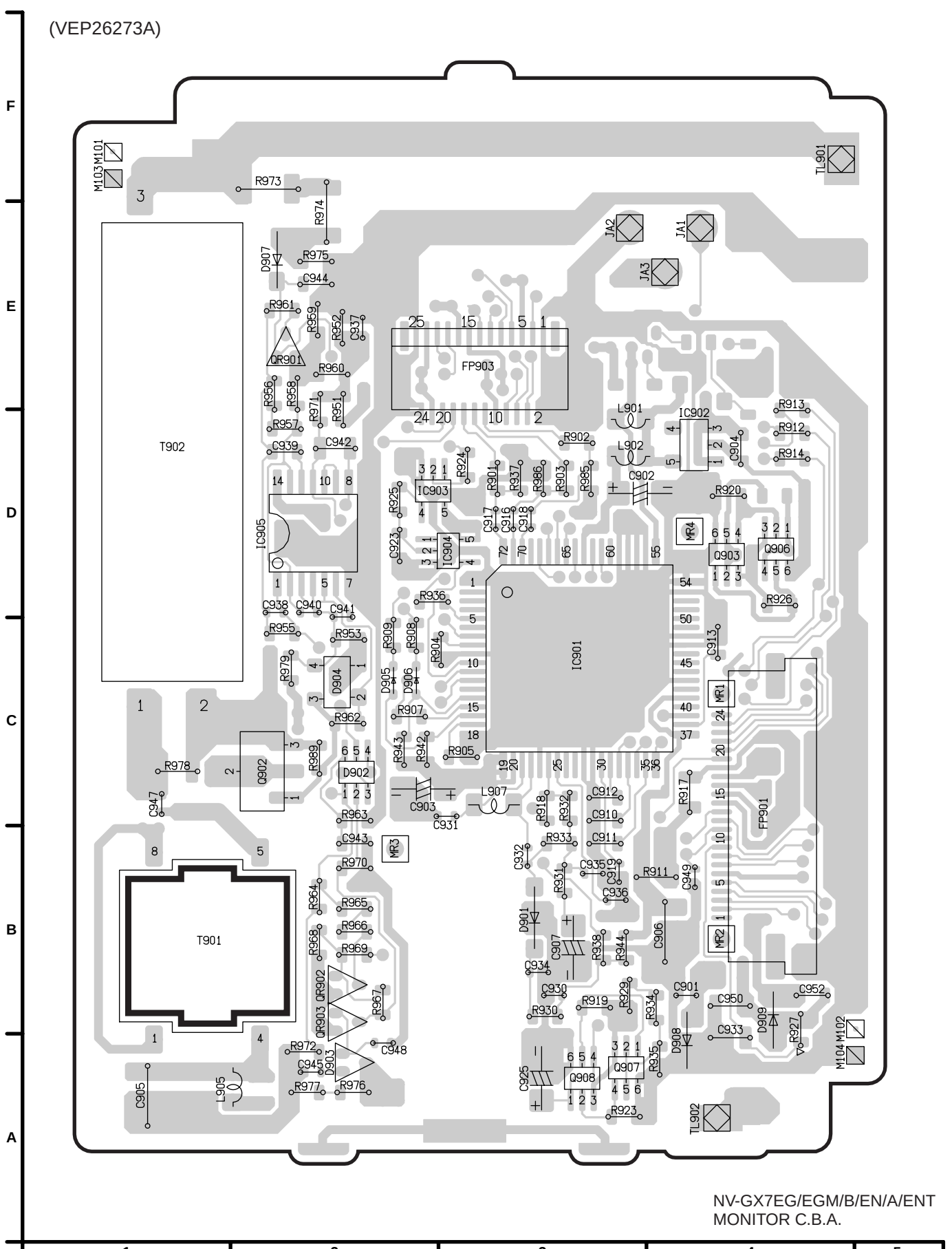
(FOIL SIDE)

Monitor C.B.A.

Integrated Circuit	
IC901	C-3
IC902	D-4
IC903	D-2
IC904	D-3
IC905	D-2
Transistor	
Q902	C-2
Q903	D-4
Q906	D-4
Q907	A-3
Q908	A-3
Transistor & Resisto	
QR901	E-2
QR902	B-2
QR903	B-2
Test Point	
TL901	F-4
TL902	A-4
Connector	
FP901	C-4
FP903	E-3
Diode	
D901	B-3
D902	C-2
D903	A-2
D904	C-2
D905	C-2
D906	C-2
D907	E-2
D908	A-4
D909	B-4
Transformer	
T901	B-1
T902	D-1
Coil	
L901	D-3
L902	D-3
L905	A-2
L907	C-3
Capacitor	
C901	B-4
C902	D-3
C903	C-2
C904	D-4
C905	A-1
C906	B-4
C907	B-3
C910	C-3
C911	B-3
C912	C-3
C913	C-4
C916	D-3
C917	D-3
C918	D-3
C919	B-3
C923	D-2
C925	A-3
C930	B-3
C931	C-3
C932	B-3
C933	A-4
C934	B-3
C935	B-3
C936	B-3
C937	E-2
C938	D-2
C939	D-2
C940	D-2
C941	C-2
C942	D-2
C943	B-2
C944	E-2
C945	A-2
C947	C-1
C948	A-2
C949	B-4
C950	B-4
C952	B-4
Resistor	
R901	D-3
R902	D-3
R903	D-3
R904	C-3
R905	C-3
R907	C-2
R908	C-2
R909	C-2
R911	B-4
R912	D-4
R913	D-4
R914	D-4
R917	C-4
R918	C-3
R919	B-3
R920	D-4
R923	A-3
R924	D-3
R925	D-2
R926	D-4
R927	B-4
R929	B-3
R930	B-3
R931	B-3
R932	C-3
R933	B-3
R934	B-4
R935	A-4
R936	D-2
R937	D-3
R938	B-3
R942	C-2
R943	C-2
R944	B-3
R951	E-2
R952	E-2
R953	C-2
R955	C-2
R956	E-2
R957	D-2
R958	E-2
R959	E-2
R960	E-2
R961	E-2
R962	C-2
R963	C-2
R964	B-2
R965	B-2
R966	B-2
R967	B-2
R968	B-2
R969	B-2
R970	B-2
R971	E-2
R972	A-2
R973	F-2
R974	E-2
R975	E-2
R976	A-2
R977	A-2
R978	C-1
R979	C-2
R985	D-3
R986	D-3
R989	C-2
Jumper	
JA1	E-4
JA2	E-3
JA3	E-4

ADDRESS INFORMATION

(VEP26273A)



NV-GX7EG/EGM/B/EN/A/ENT
MONITOR C.B.A.

(MONITOR C.B.A.)

:VIDEO MAIN SIGNAL PATH

TO
MAIN CONNECTION
FP903

FP601-24,25,26	D GND	1
FP601-24,25,26	D GND	2
FP601-23	LCD RVS	3
FP601-22	MON M B OUT	4
FP601-21	LCD 3V	5
FP601-20	MON M G OUT	6
FP601-19	M PLL DAC	7
FP601-18	MON M R OUT	8
FP601-17	M HD	9
FP601-16	M 5V	10
FP601-15	VBLK	11
FP601-14	M B	12
FP601-13	MON M PLL	13
FP601-12	M G	14
FP601-11	M 12V	15
FP601-10	M R	16
FP601-9	M BL 5V	17
FP601-8	BL BRIGHT (H)	18
FP601-7	LCD SCK	19
FP601-6	LCD SD	20
FP601-5	LCD CS	21
FP601-3,4	M NOREG	22
FP601-3,4	M NOREG	23
FP601-1,2	NOREG GND	24
FP601-1,2	NOREG GND	25

IC991
DN8797MS
(FORWARD/REVERS)

HALL SENSOR FLEX.

IC902
C0CBCAC00046

IC903
C0JBAB000350

IC904
C0JBAB000391

IC905
C0JBAB000247

IC901
C0HBA0000071
(LCD CONTROLLER/
SIGNAL PROCESSOR)

QR901
UNR9210J0L
(BACKLIGHT CONTROL)

QR902
UNR9210J0L
(BACKLIGHT CONTROL :ON)

QR903
UN9214J
(BACKLIGHT CONTROL)

Q903
B1HFCFA00015
(AMP)

Q906
B1HFCFA00015
(AMP)

Q907
B1HFCFA00015
(AMP)

Q908
B1HFCFA00015
(AMP)

Q902
2SK2159
(BACKLIGHT CONTROL)

D902
B0ADDJ000011

D903
MA3S132D

D904
MA4X159A0L

D907
MAZJ111100L

D908
MAZ8270L

D909
MAZ80430M

D901
MA2X33800L

T901
ETJ09K59AZ

T902
EFTU21R204

TO
MONITOR LCD PANEL
FP901

		24
COM		23
V ST		22
V CK		21
EN		20
DWN		19
VDD		18
VSS		17
VDDG		16
VSSG		15
SLVSG		14
WIDE		13
H ST		12
REF		11
		10
C/R		9
H CK2		8
H CK1		7
PSIG		6
G		5
R		4
B		3
RGT		2
		1

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.(MONITOR:ON)

NV-GX7EG/EGM/B/EN/A/ENT
MONITOR & HALL SENSOR
FLEX.SCHEMATIC DIAGRAM

LENS UNIT

CCD FLEX.

ZOOM/FOCUS

IRIS

HOTSHOE

FLASH

SD/MMC

SPEAKER

MIC

EXT MIC

CAMERA

IC205 (CCD V DRIVE)

IC201 (CG/SSG)

X201 2FCK OSC (72MHz)

IC202 (CDS,AGC,AD)

IC301 (DSP)

IC303 (EEP ROM)

IC302 (CAMERA MICROCOMPUTER)

IR SENSOR

LENS DRIVE

IC701 (LPF)

IC702 (LENS DRIVE)

SUB C.B.A.

DSC

IC3456 TI DSP (MPEG4/VOICE COMPRESSION/EXPANSION, JPEG(MPEG) COMPRESION PROCESSOR)

IC3451 (SD I/F)

IC3452 (16M FLASH MEMORY)

IC3457 (64M SDRAM)

IC3453 DSC MICROCOMPUTER (JPEG COMPRESSION/EXPANSION JPEG(MPEG)COMPRESSION, DSC CONTROL)

SD AUDIO

IC4501 (AUDIO AD/DA)

EX INPUT

IC3501 (EXT INPUT)

IC3503,3504 (SW & AMP)

S VIDEO IN/OUT

AV IN/OUT HP OUT

IC3455 (USB DRIVE)

USB TERMINAL

VIDEO1

IC3001 TOPS (VIDEO I/O,VCO,COMPRESSOR, SHUFFLE,SHUFFLE MEMORY, AUDIO PROCESSOR,ECC, ECC MEMORY)

IC3004 (AUDIO AD/DA)

IC3002 (AV DRIVER)

VIDEO2

IC3202 PLANET (DIGITAL I/F)

IC3201 RIO (MODULATION,VITERBI,EQ)

DV TERMINAL

HEAD

CYLINDER MOTOR

CAPSTAN MOTOR

LOADING MOTOR

RS232C TERMINAL

EVF C.B.A.

0.44"LCD

LCD

IC601 (LCD CONTROLLER & SIGNAL PROCESSOR)

2.5"LCD

IC901 (LCD CONTROLLER & SIGNAL PROCESSOR)

MONITOR C.B.A.

POWER

IC1001 (POWER)

HEAD/REC AMP

IC5001 (HEAD/REC AMP)

CONTROL

IC2001 (CONTROL MICROCOMPUTER)

IC2010 (COMP)

IC2008 (EEP ROM)

IC2011 (RS232C DRIVE)

DRIVE

IC2201 (CYL/CAP/LOADING MOTOR DRIVE)

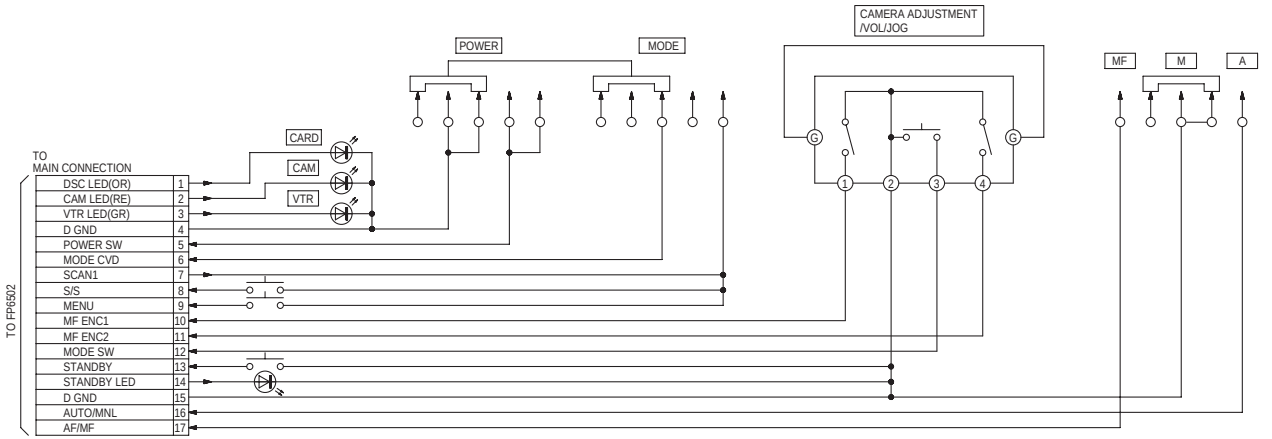
IC2601 (RTC)

SIDE(L)C.B.A.

MAIN C.B.A.

NV-GX7EG/EGM/B/EN/A/ENT
OVERALL SCHEMATIC DIAGRAM

(REAR OPERATION UNIT)



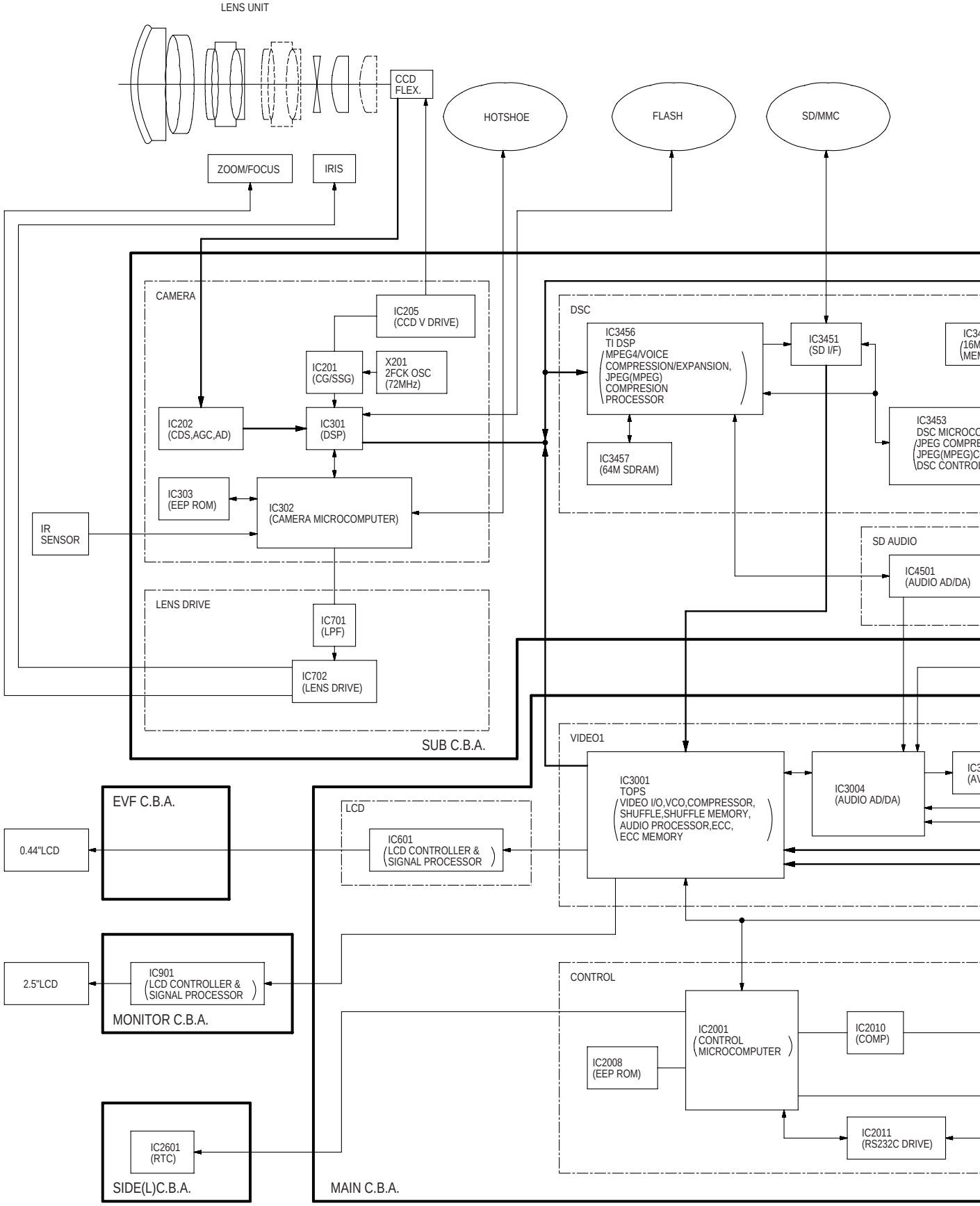
NV-GX7EG/EGM/B/EN/A/ENT
REAR OPERATION UNIT SCHEMATIC DIAGRAM

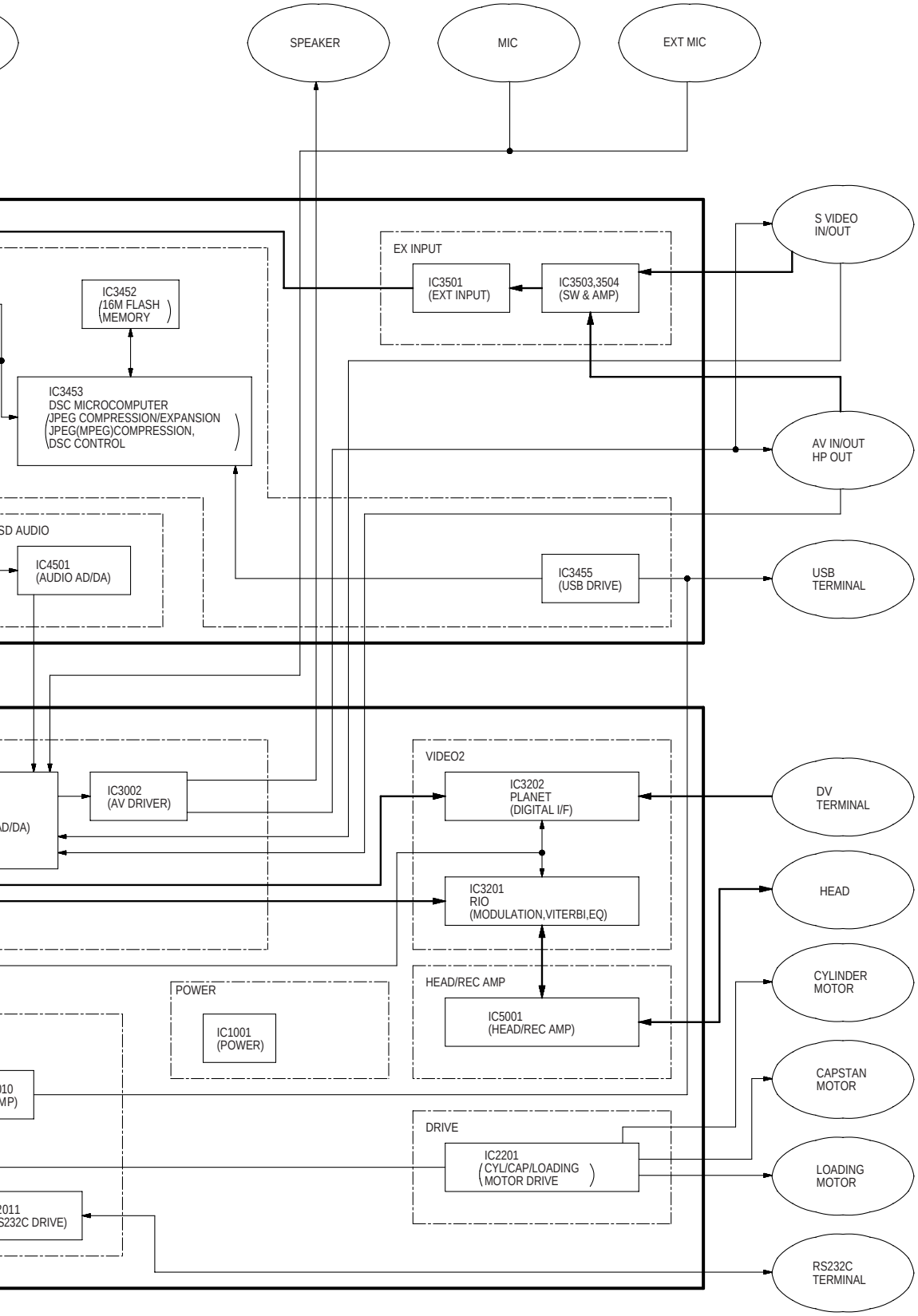
C B A

1 2 3 4

11 SCHEMATIC DIAGRAMS

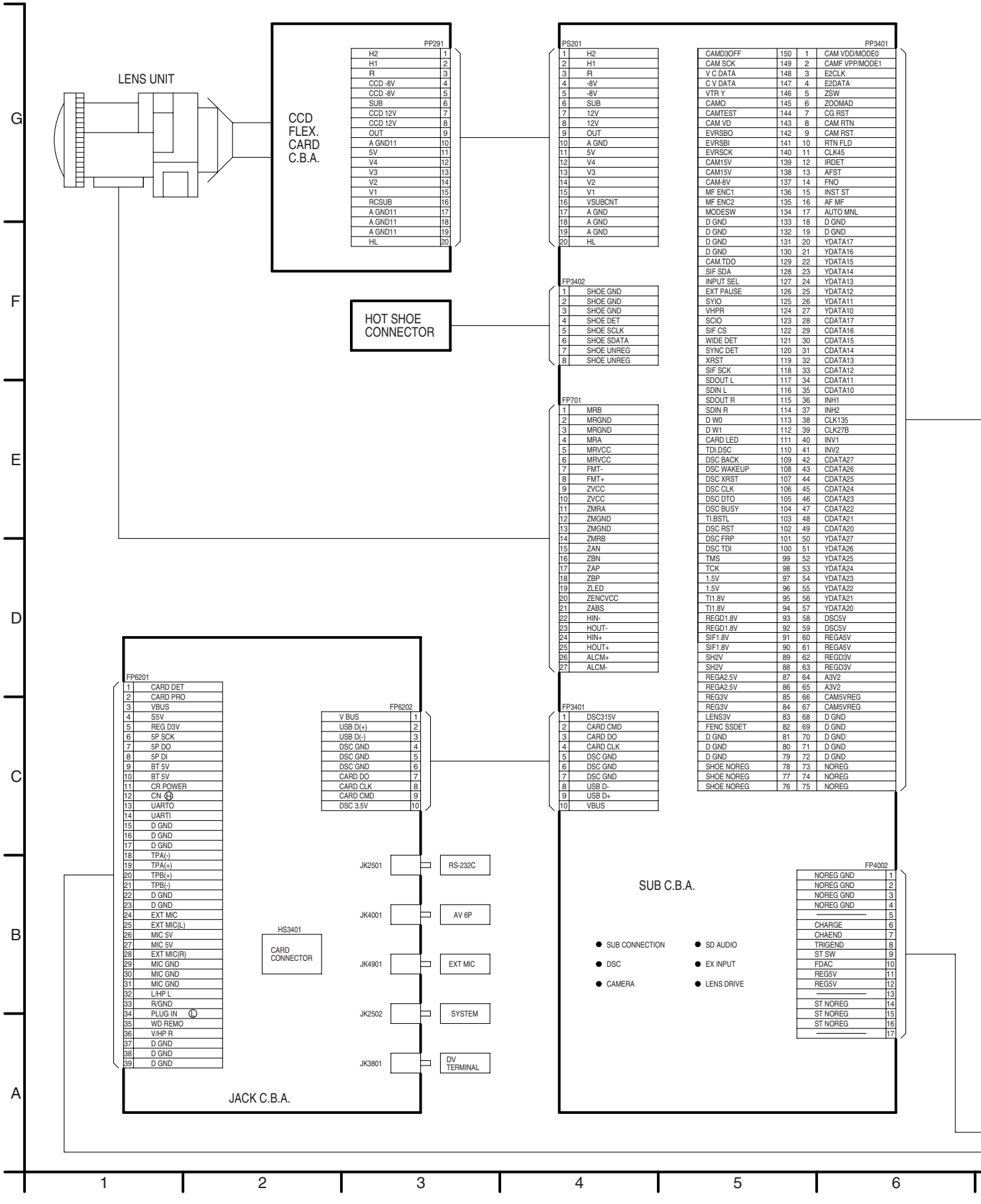
11.1. OVERALL SCHEMATIC DIAGRAM

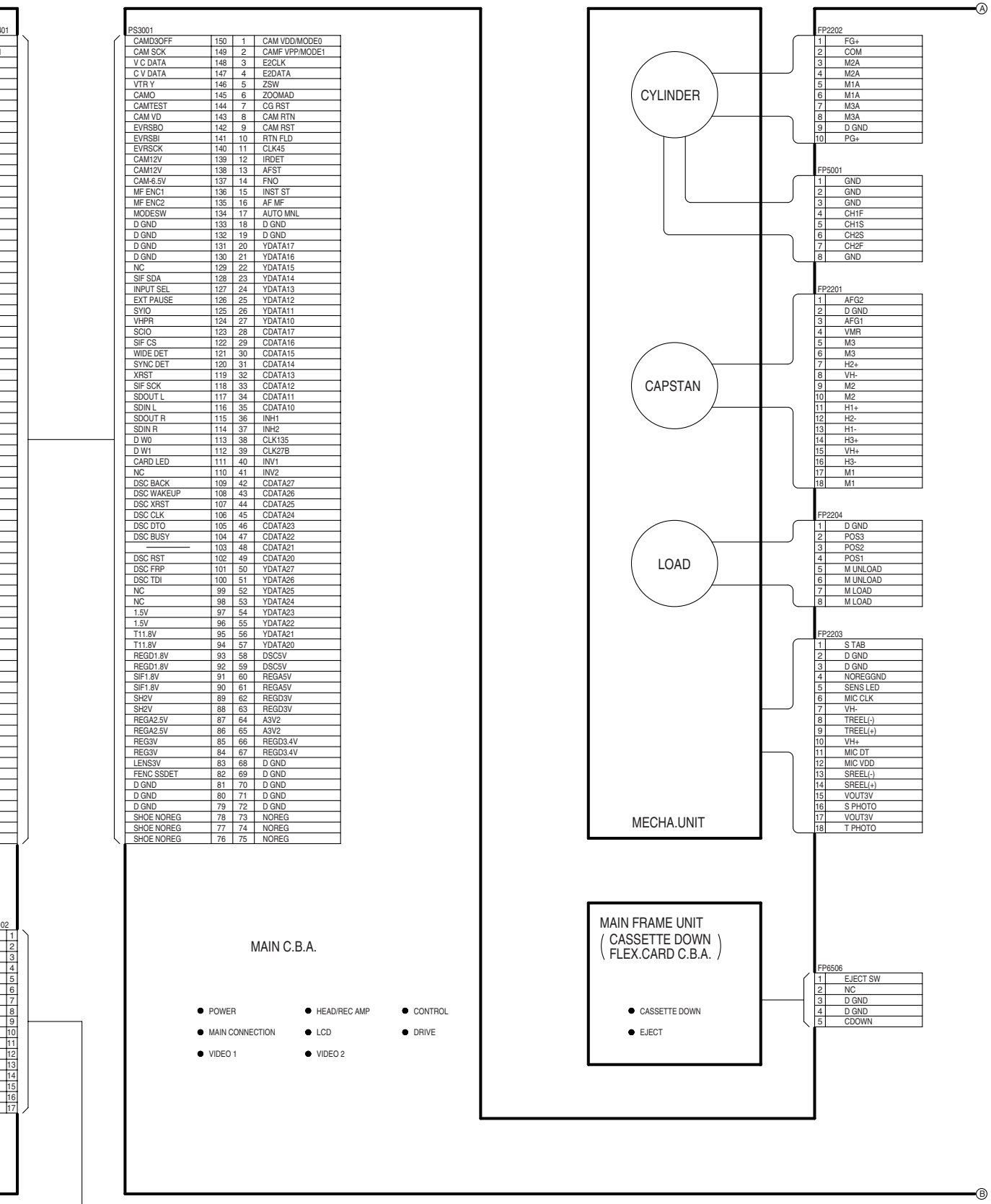




NV-GX7EG/EGM/B/EN/A/ENT
OVERALL SCHEMATIC DIAGRAM

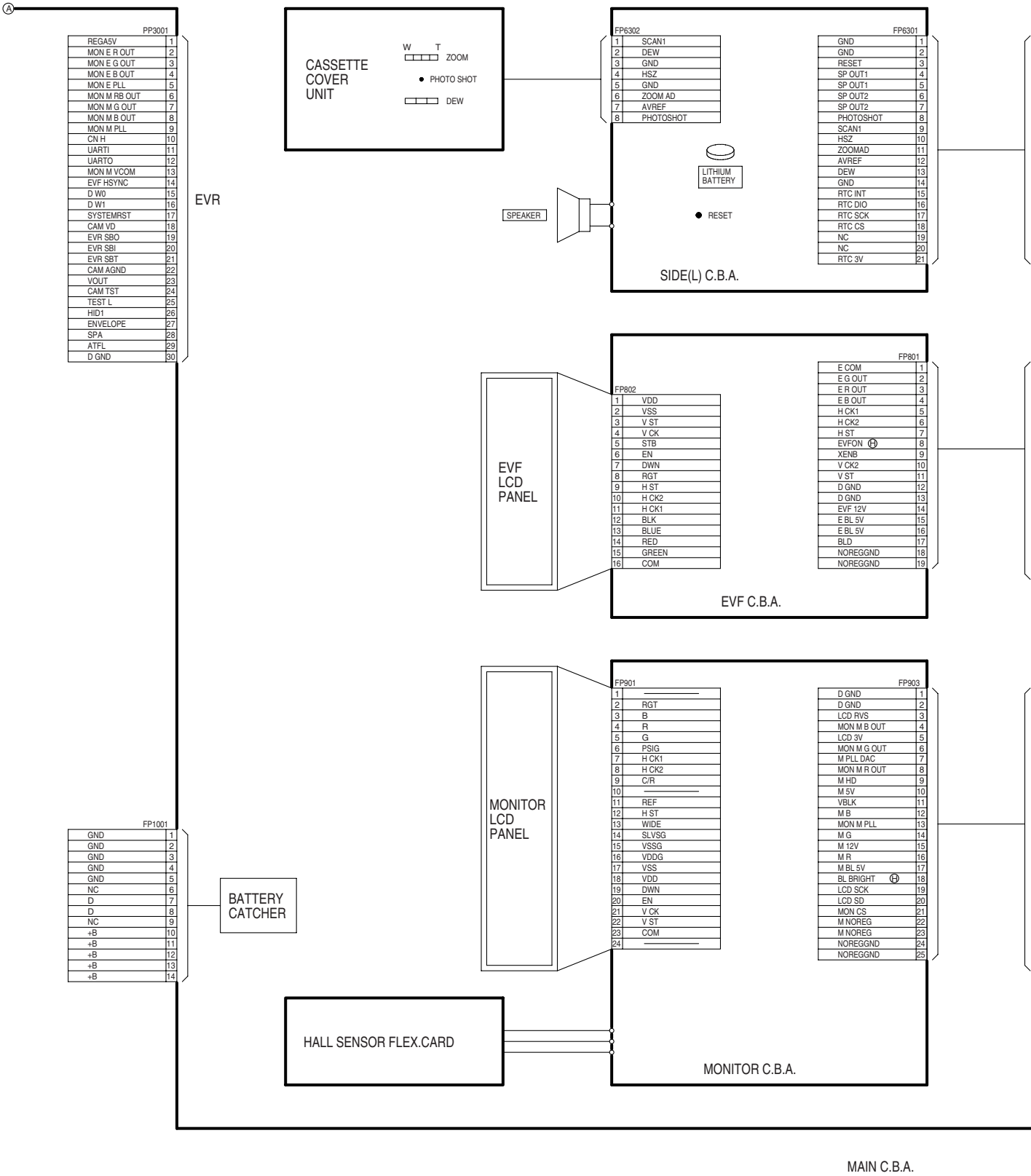
11.2. INTERCONNECTION SCHEMATIC DIAGRAM





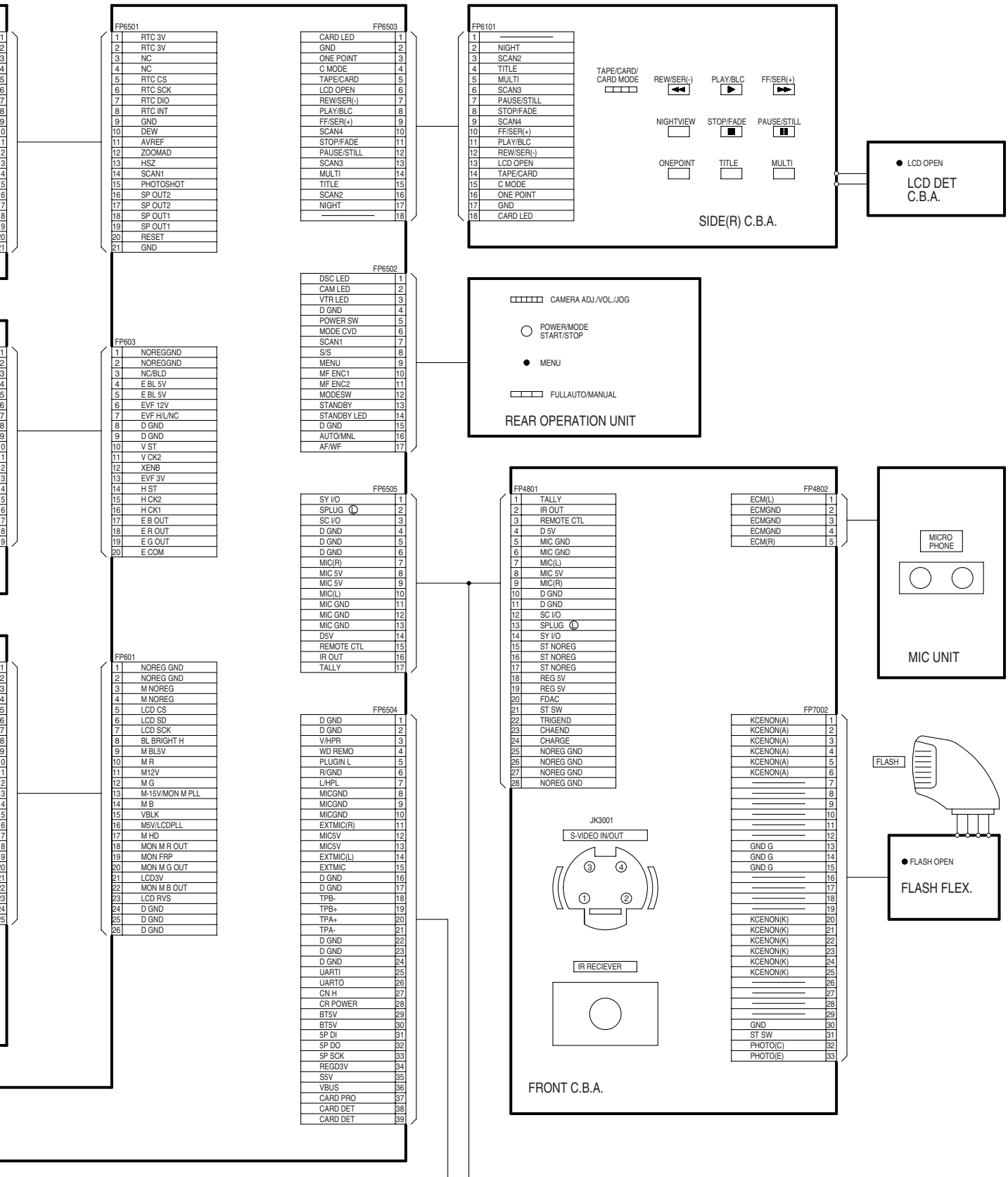
NV-GX7EG/EGM/B/EN/A/ENT INTERCONNECTION SCHEMATIC DIAGRAM

6 7 8 9 10 11



NV-GX7EG/EGM/B/EN/A/ENT INTERCONNECTION SCHEMATIC DIAGRAM

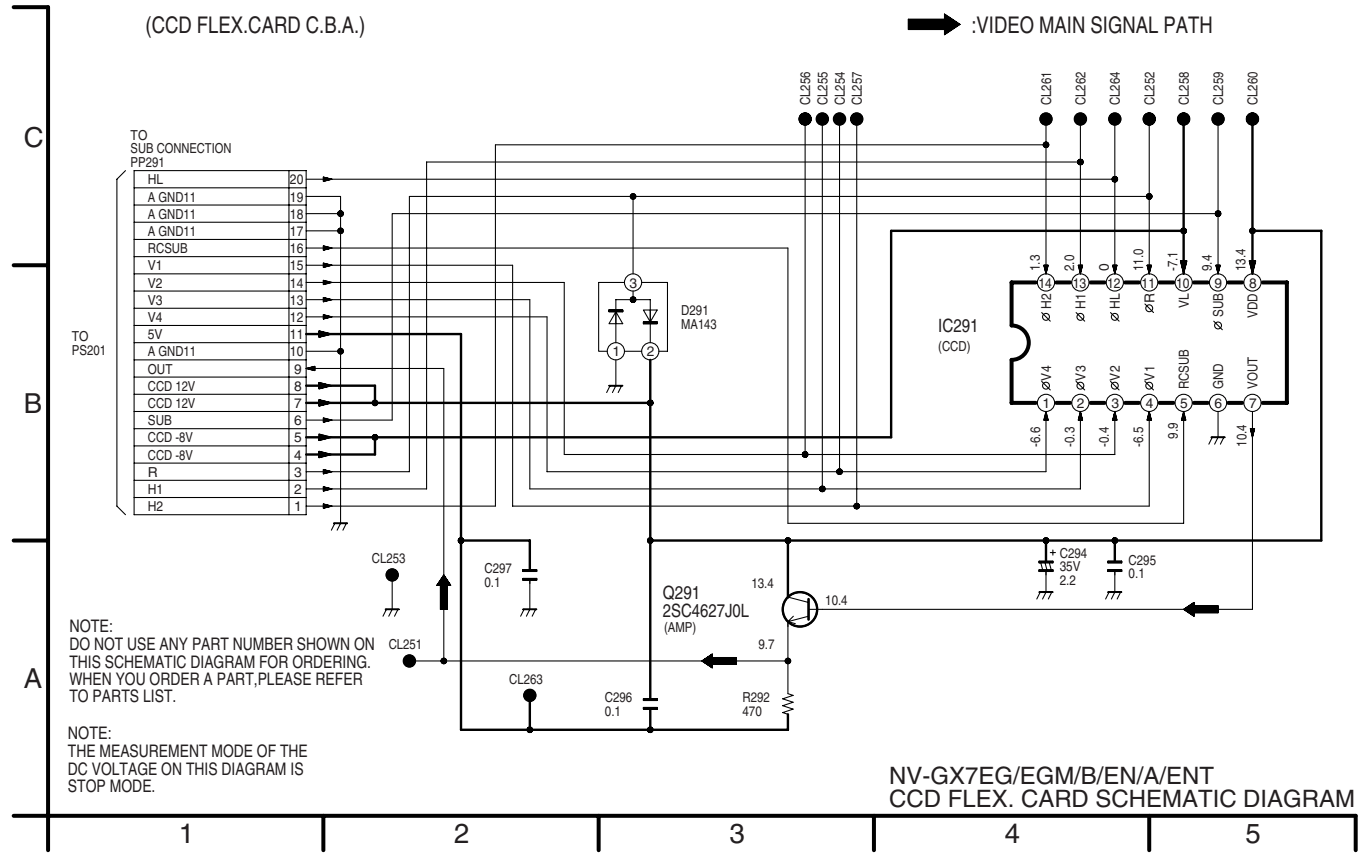
12 13 14 15 16 17



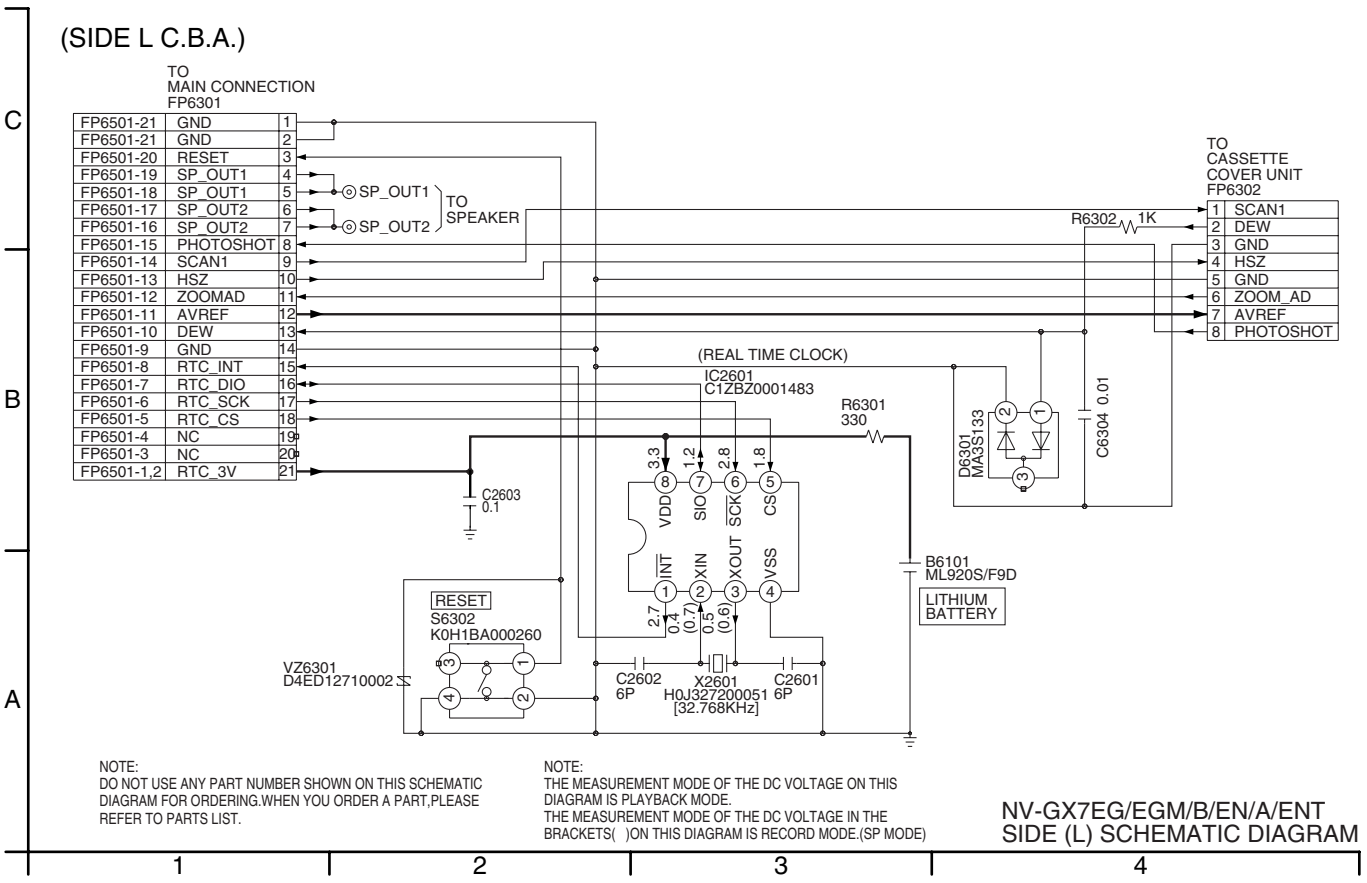
NV-GX7EG/EGM/B/EN/A/ENT
INTERCONNECTION SCHEMATIC DIAGRAM

17 | 18 | 19 | 20 | 21 | 22

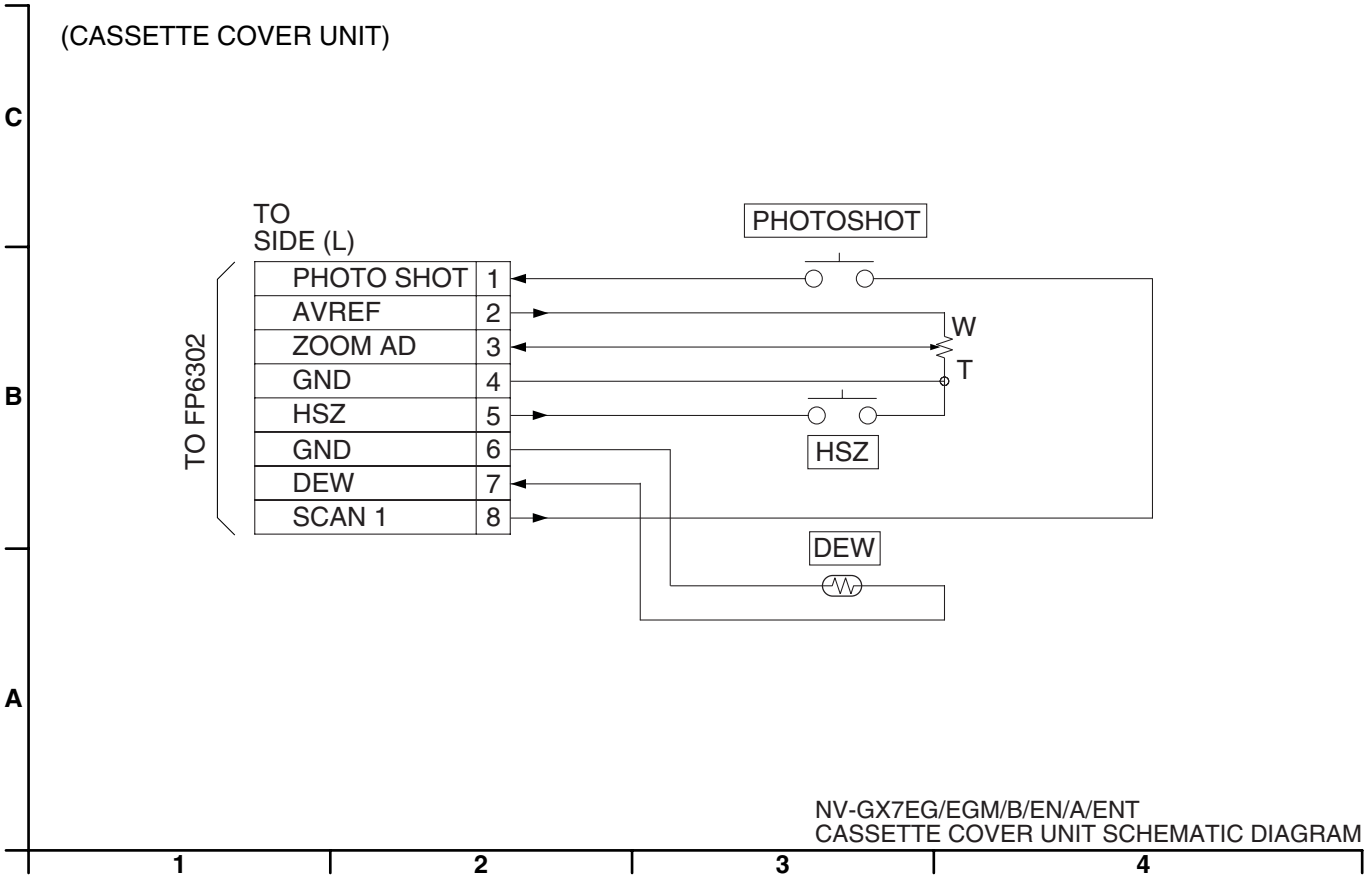
11.3. CCD FLEX. CARD SCHEMATIC DIAGRAM



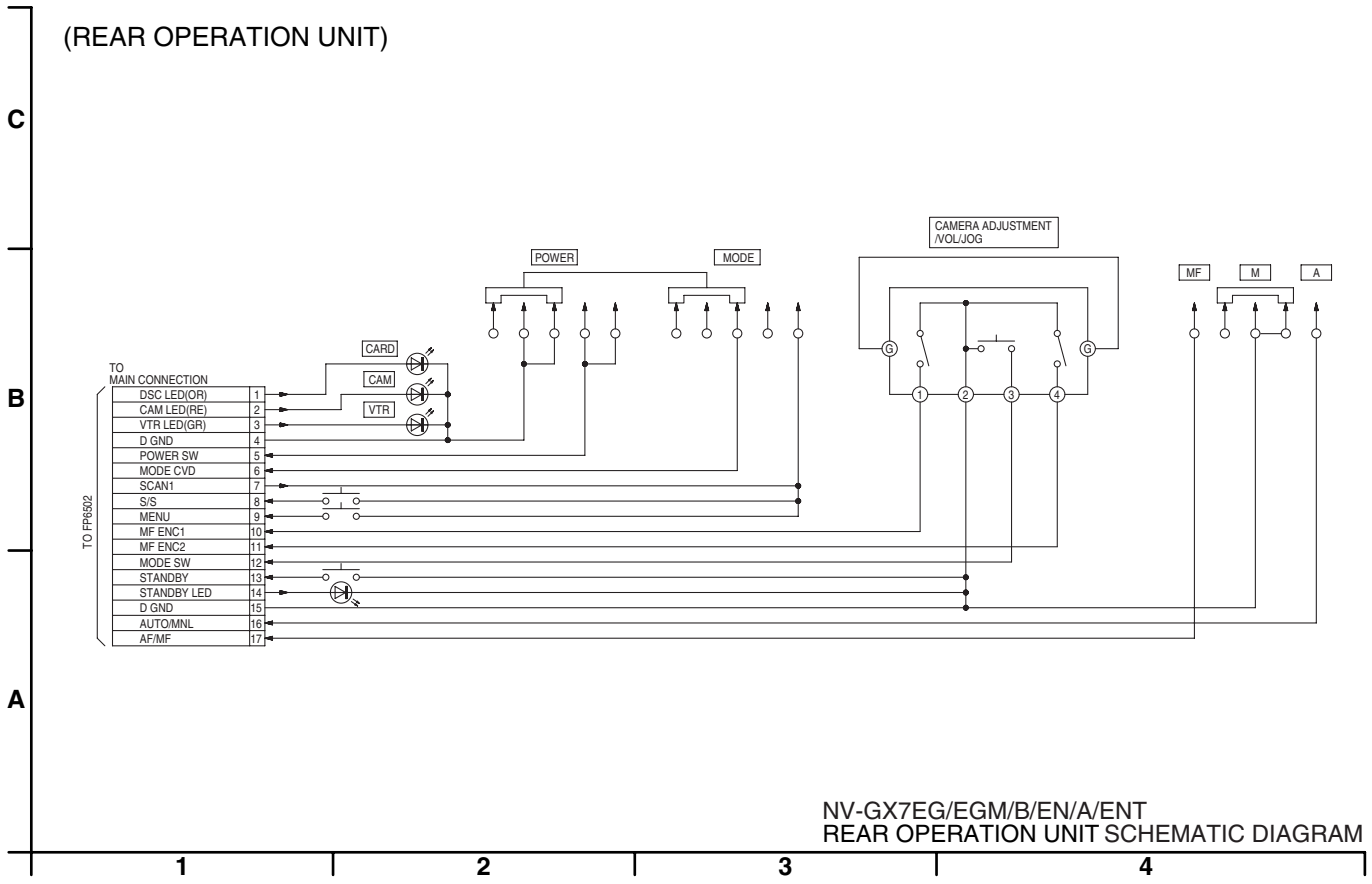
11.4. SIDE (L) SCHEMATIC DIAGRAM



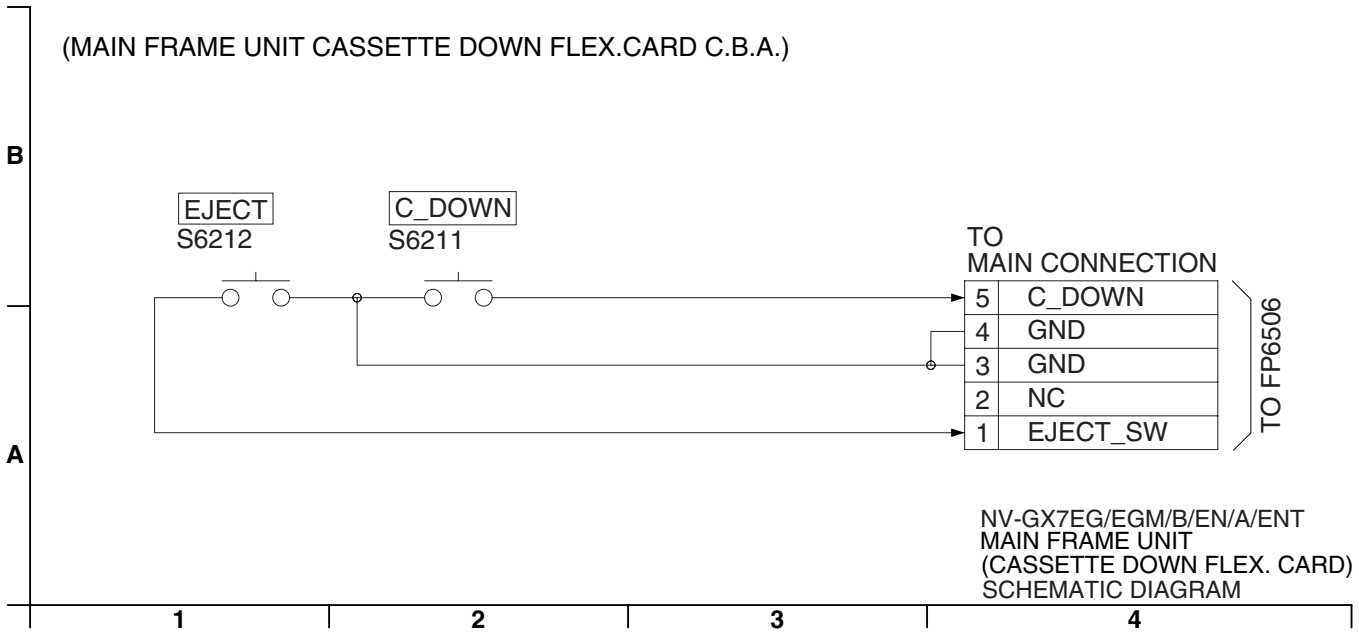
11.5. CASSETTE COVER UNIT SCHEMATIC DIAGRAM



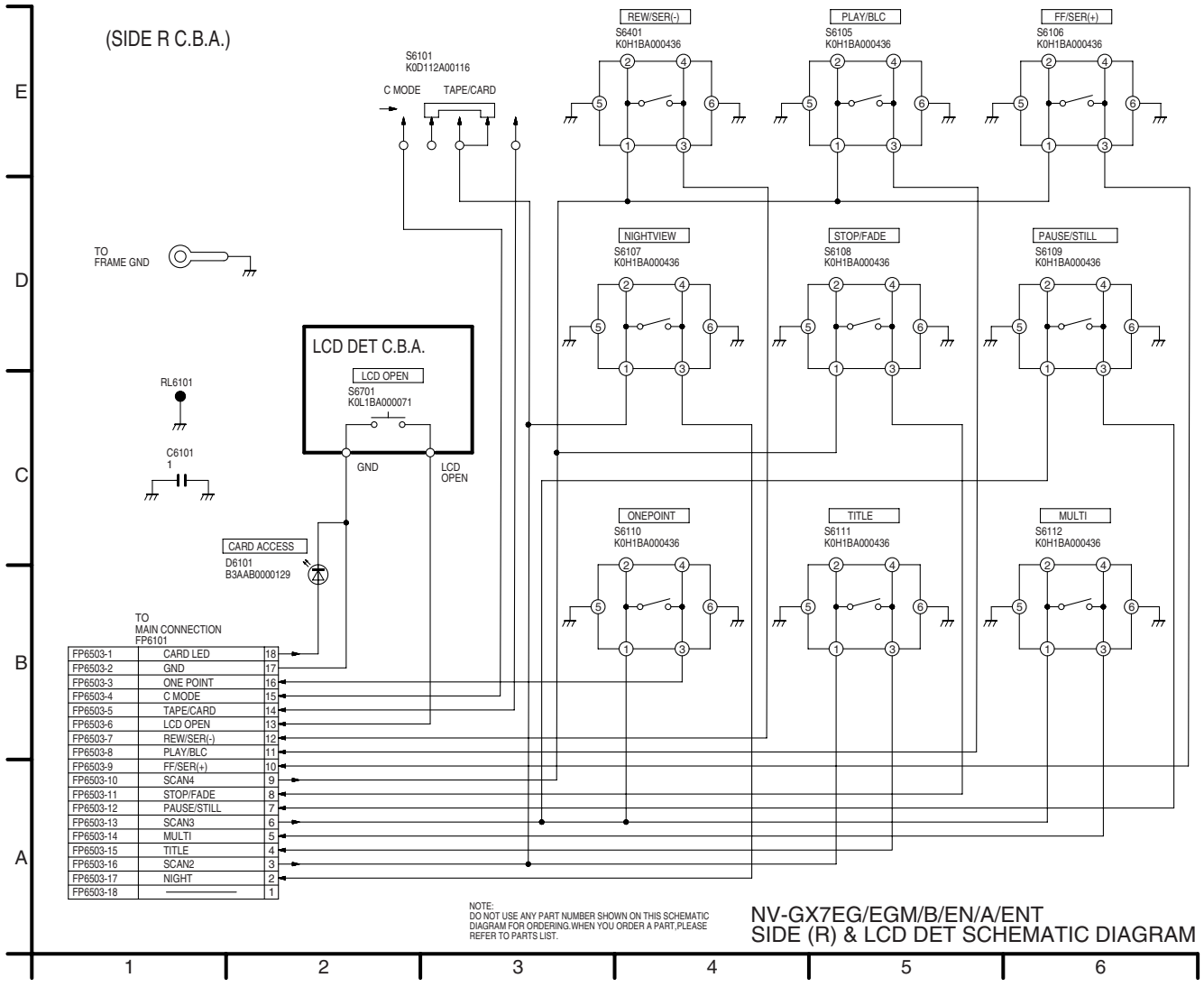
11.6. REAR OPERATION UNIT SCHEMATIC DIAGRAM



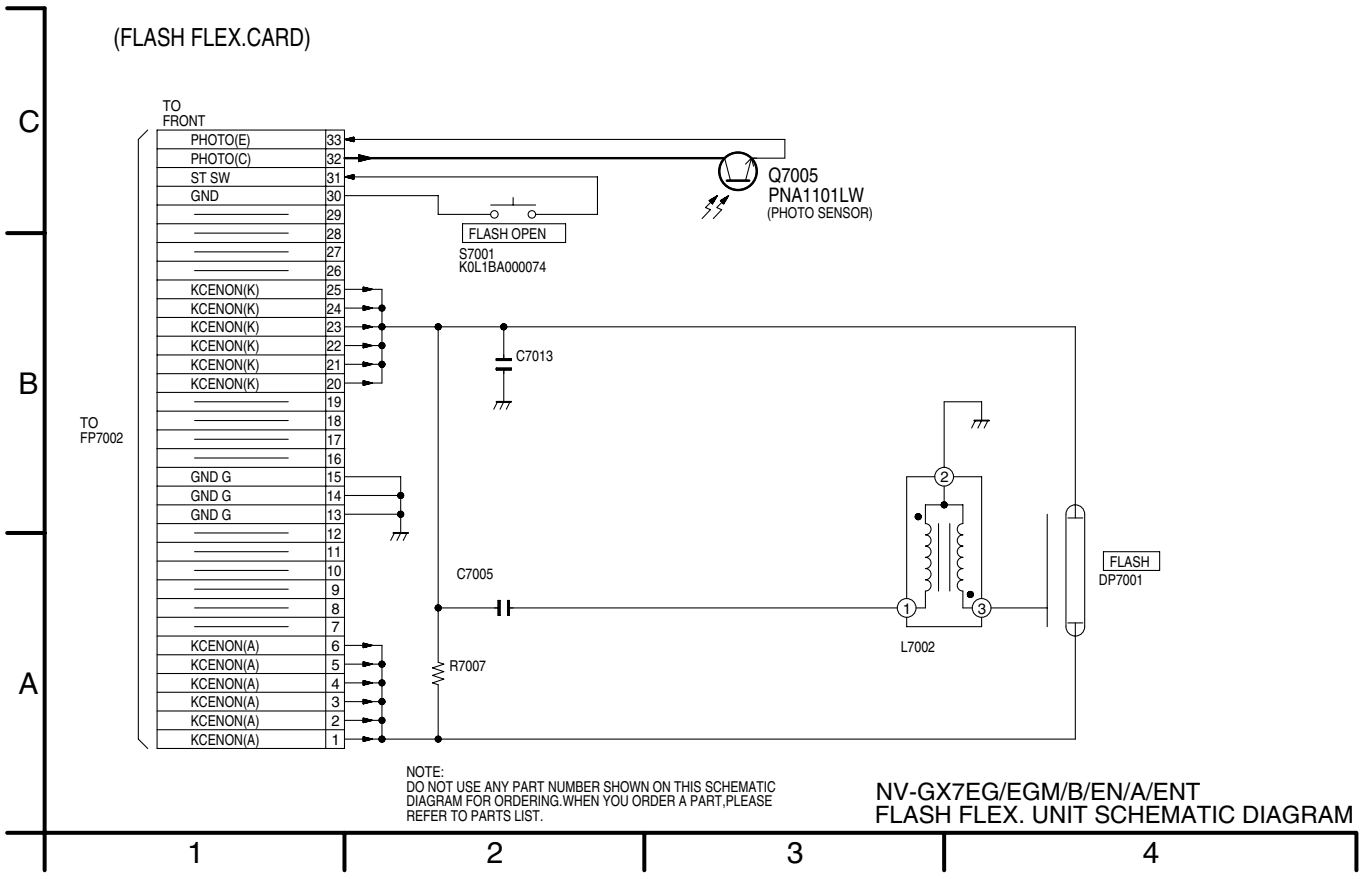
11.7. MAIN FRAME UNIT (CASSETTE DOWN FLEX. CARD) SCHEMATIC DIAGRAM



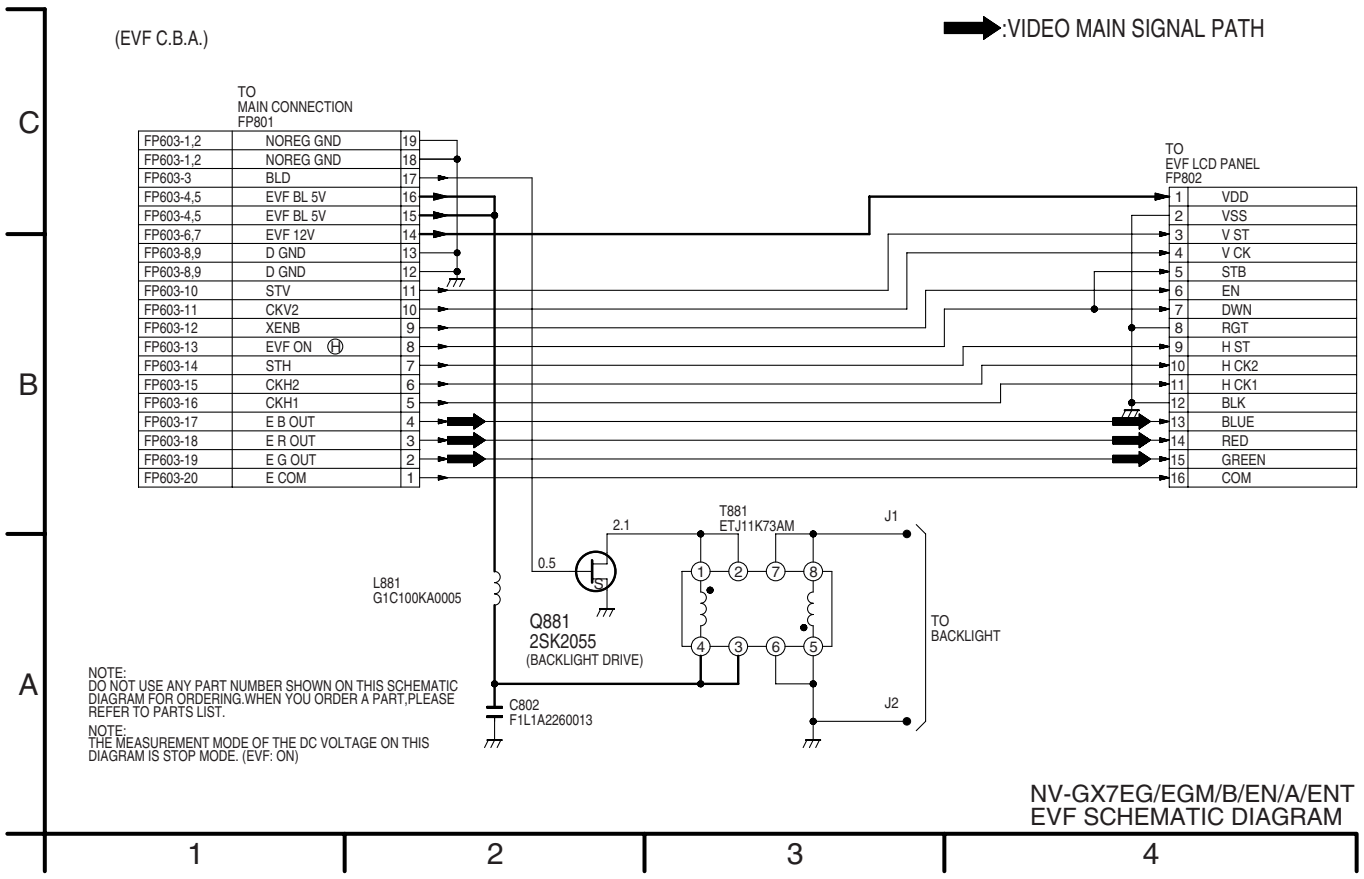
11.8. SIDE (R) & LCD DET SCHEMATIC DIAGRAM



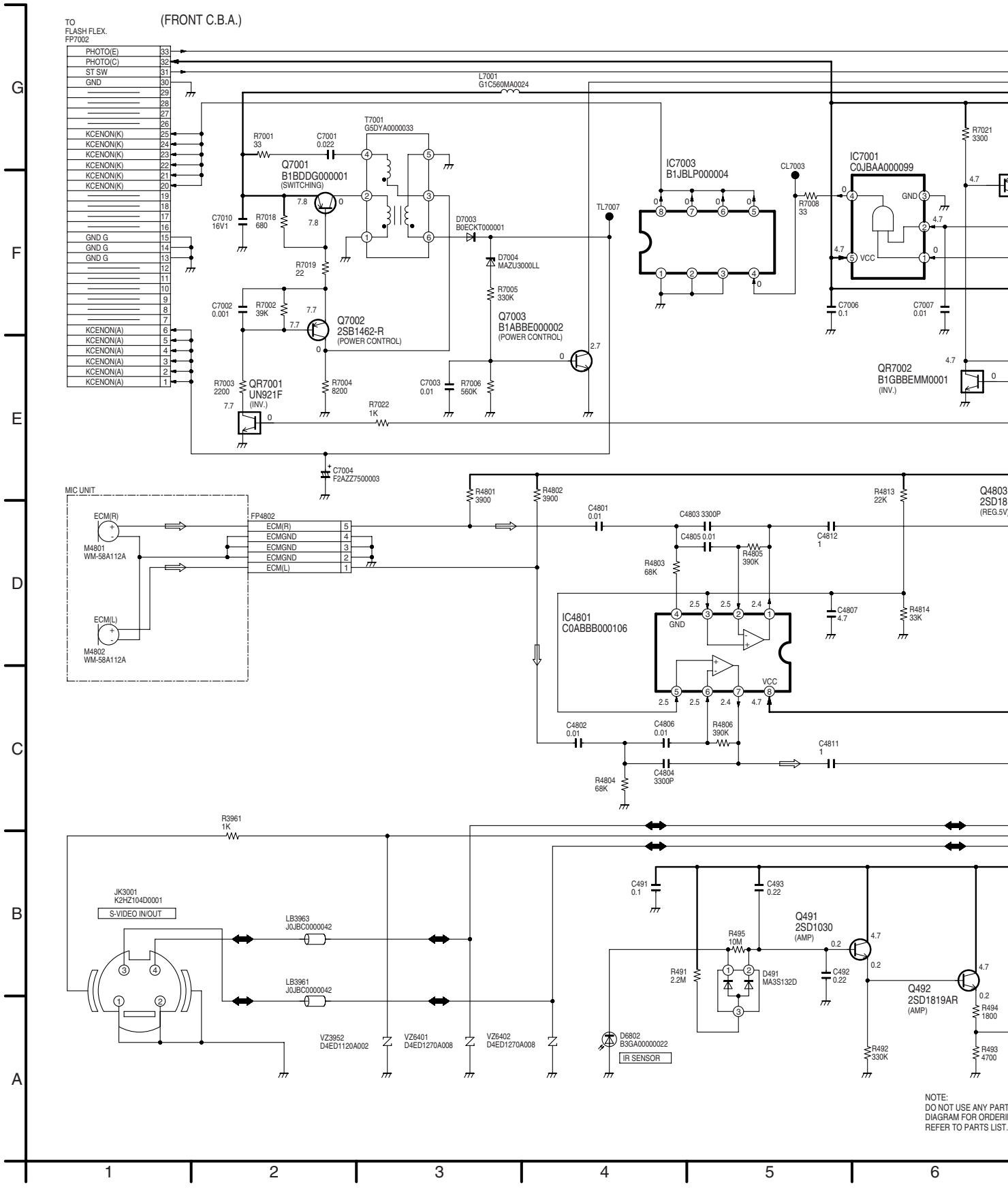
11.9. FLASH FLEX. UNIT SCHEMATIC DIAGRAM

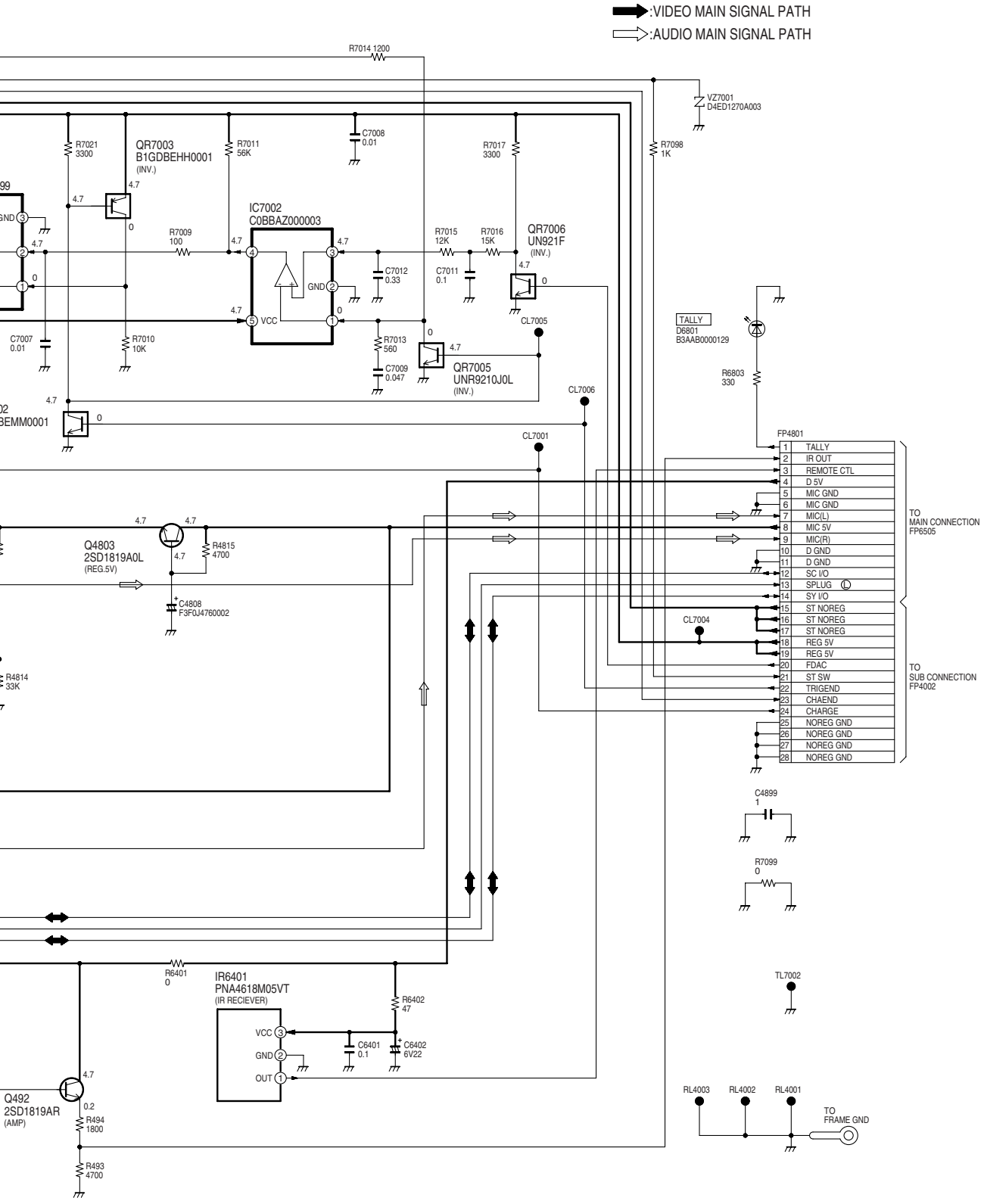


11.10. EVF SCHEAMTIC DIAGRAM



11.11. FRONT & MIC UNIT SCHEMATIC DIAGRAM





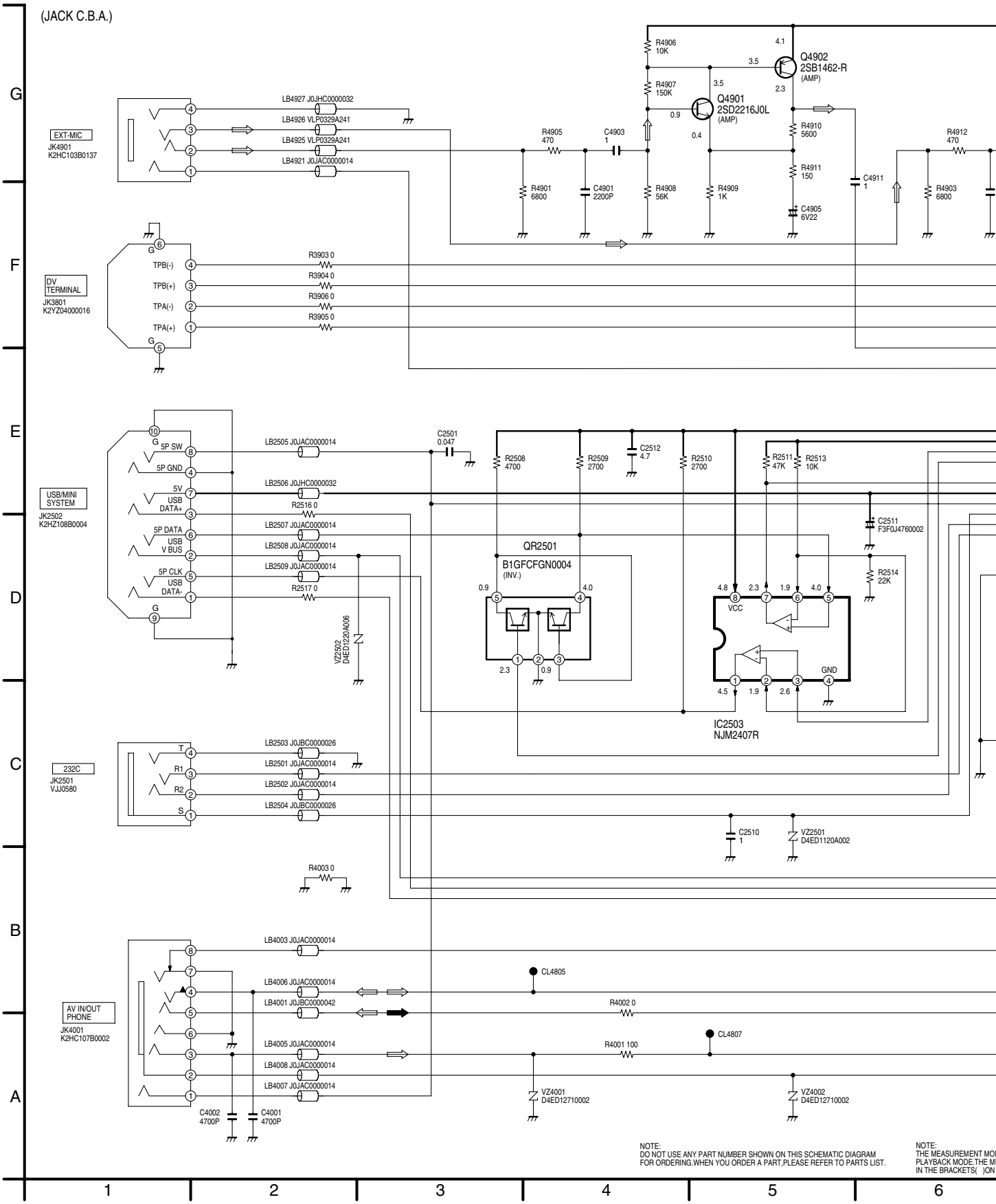
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

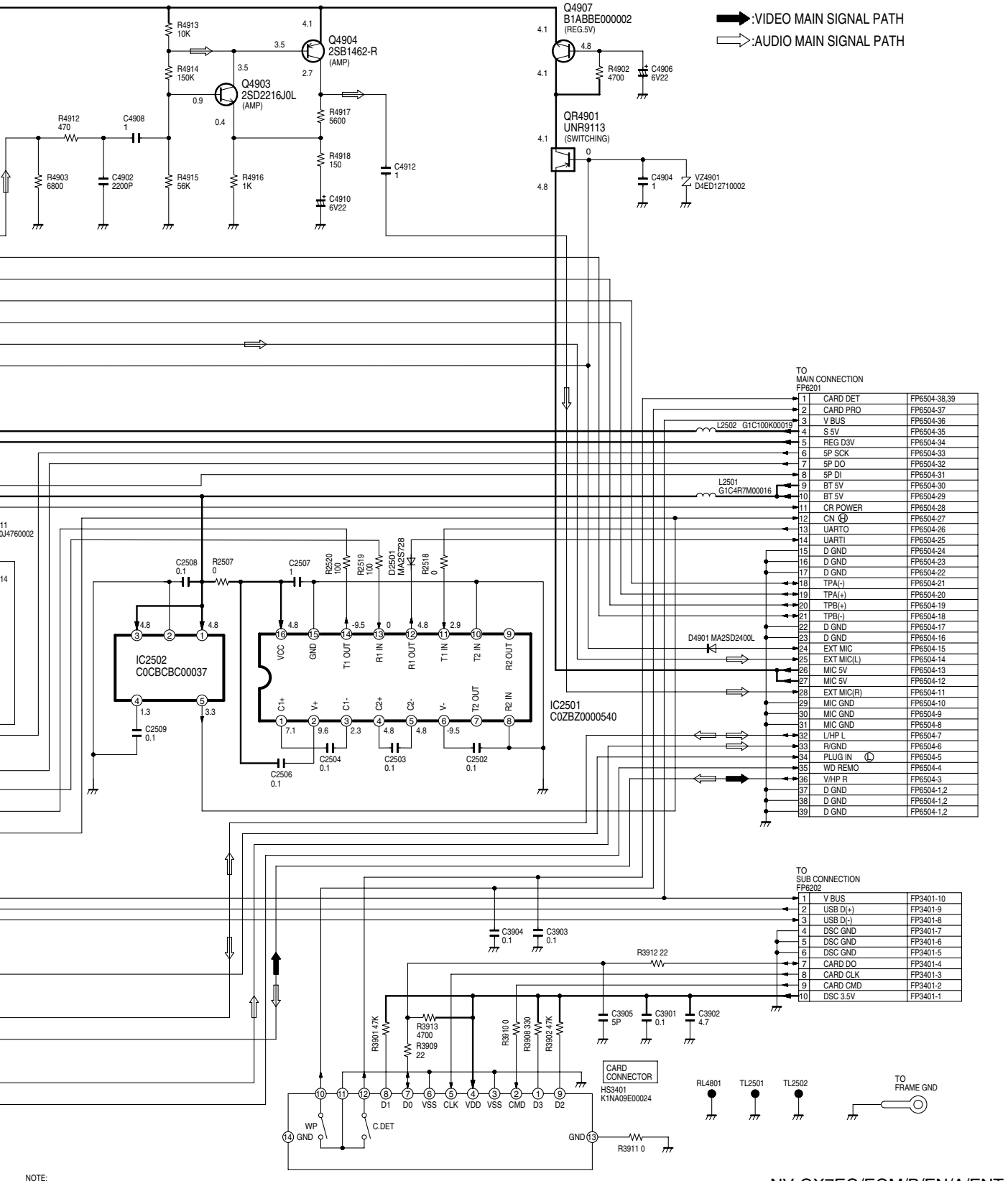
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.
(SP MODE)

NV-GX7EG/EGM/B/EN/A/ENT
FRONT & MIC UNIT SCHEMATIC DIAGRAM

6	7	8	9	10	11

11.12. JACK SCHEMATIC DIAGRAM



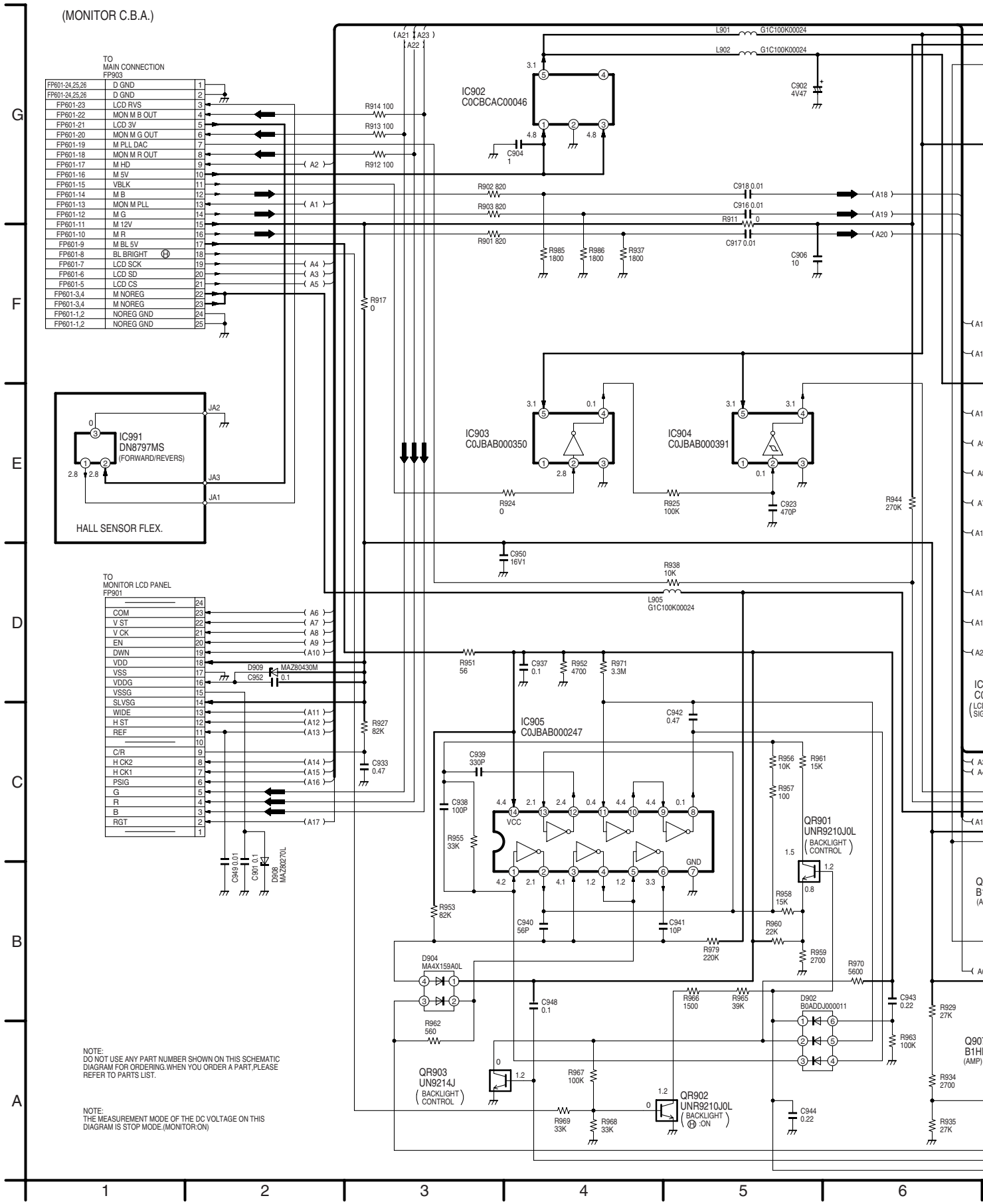


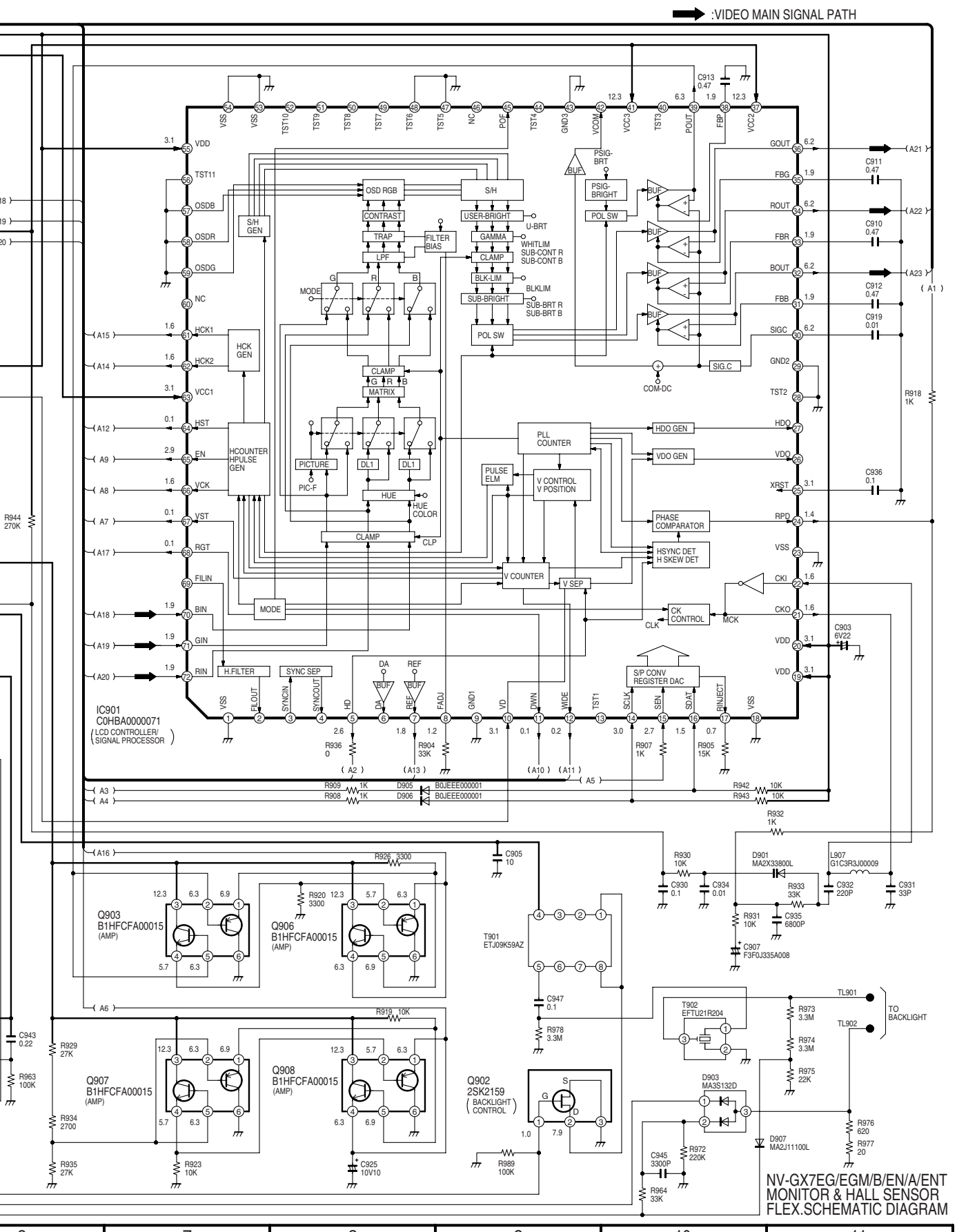
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

NV-GX7EG/EGM/B/EN/A/ENT
JACK SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11

11.13. MONITOR & HALL SENSOR FLEX. SCHEMATIC DIAGRAM

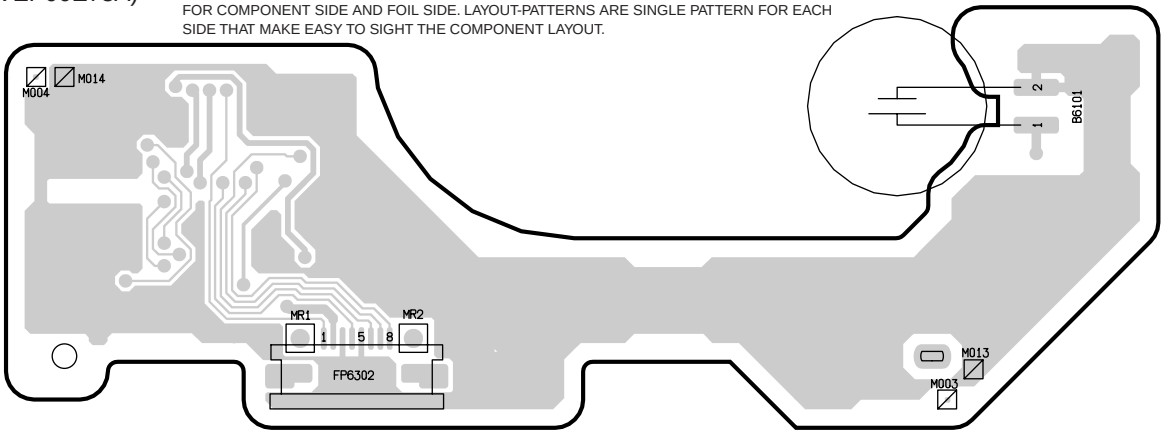



:VIDEO MAIN SIGNAL PATH
IC901
C0HBA0000071
LCD CONTROLLER/
SIGNAL PROCESSOR
OSD RGB
CONTRAST
TRAP
LPF
FILTER BIAS
S/H
USER-BRIGHT
GAMMA
CLAMP
BLK-LIM
SUB-BRIGHT
POL SW
S/H GEN
HCK GEN
HCOUNTER HPULSE GEN
MODE
CLAMP
MATRIX
PICTURE
PIC-F
DL1
HUE
HUE COLOR
CLP
PLL COUNTER
PULSE ELM
V CONTROL V POSITION
V COUNTER
V SEP
HDO GEN
VDO GEN
PHASE COMPARATOR
HSYNC DET H SKEW DET
CK CONTROL
MCK
CLK
S/P CONV REGISTER DAC
H.FILTER
SYNC SEP
PSIG-BRT
PSIG-BRIGHT
BUF
COM-DC
SIG.C
Q903 B1HFCFA00015 (AMP)
Q906 B1HFCFA00015 (AMP)
Q907 B1HFCFA00015 (AMP)
Q908 B1HFCFA00015 (AMP)
Q902 2SK2159 (BACKLIGHT CONTROL)
T901 ETJ09K59AZ
T902 EFTU21R204
TO BACKLIGHT
D903 MA3S132D
D907 MA2J11100L
D901 MA2X33800L
L907 G1C3R3J00009
NV-GX7EG/EGM/B/EN/A/ENT
MONITOR & HALL SENSOR
FLEX.SCHEMATIC DIAGRAM

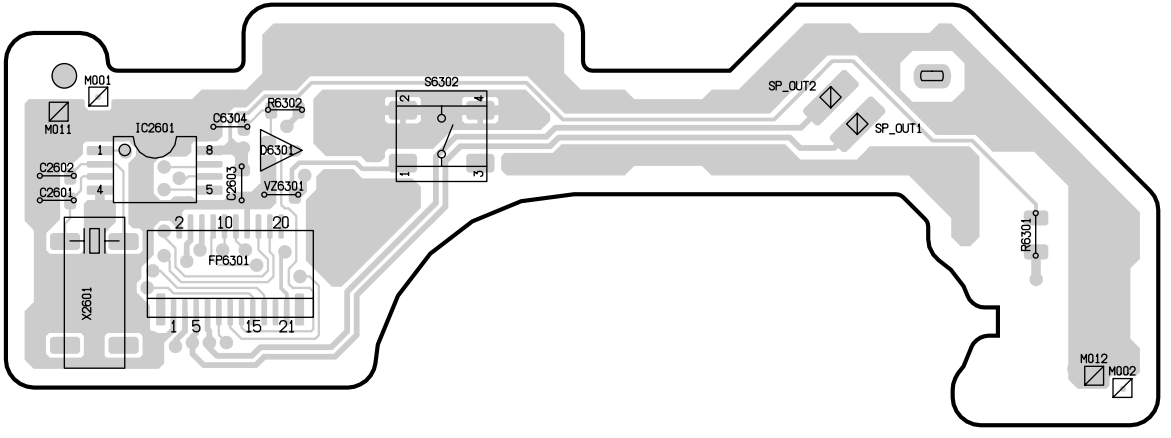
(VEP06E78A)

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.



(COMPONENT SIDE)



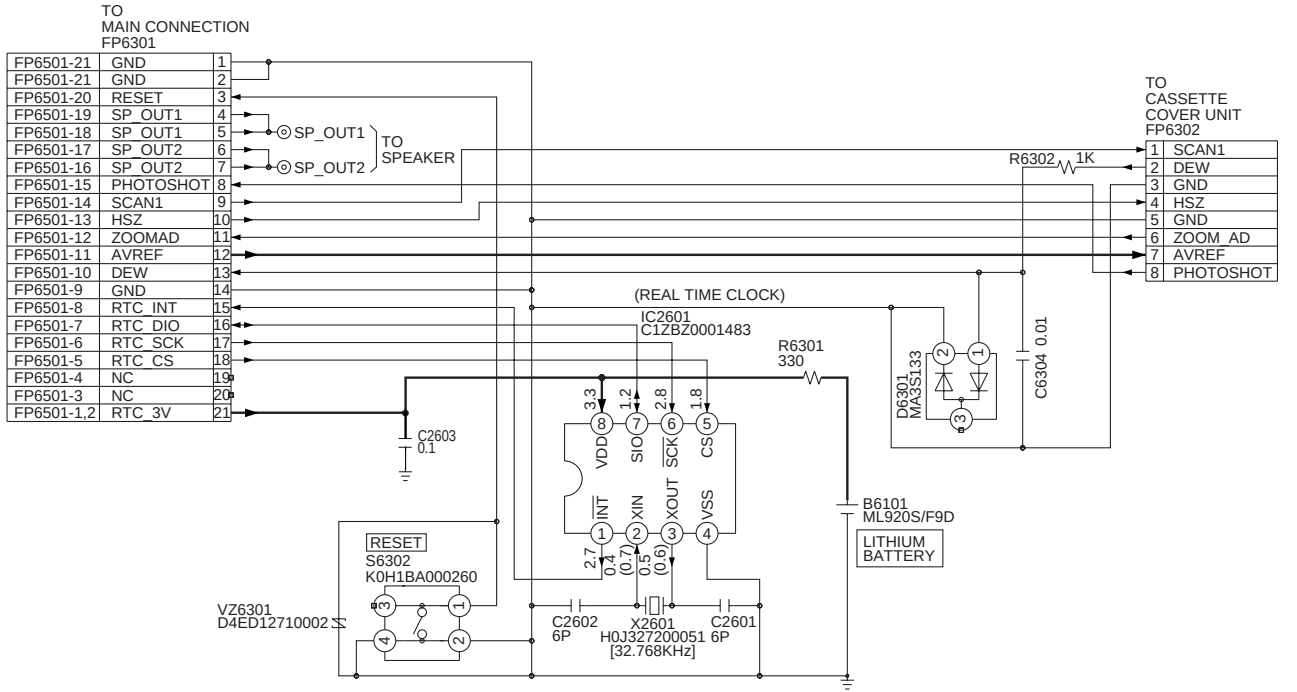
(FOIL SIDE)

NV-GX7EG/EGM/B/EN/A/ENT
SIDE (L) C.B.A.

D C B A

1 2 3 4 5

(SIDE L C.B.A.)



NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

NV-GX7EG/EGM/B/EN/A/ENT
SIDE (L) SCHEMATIC DIAGRAM

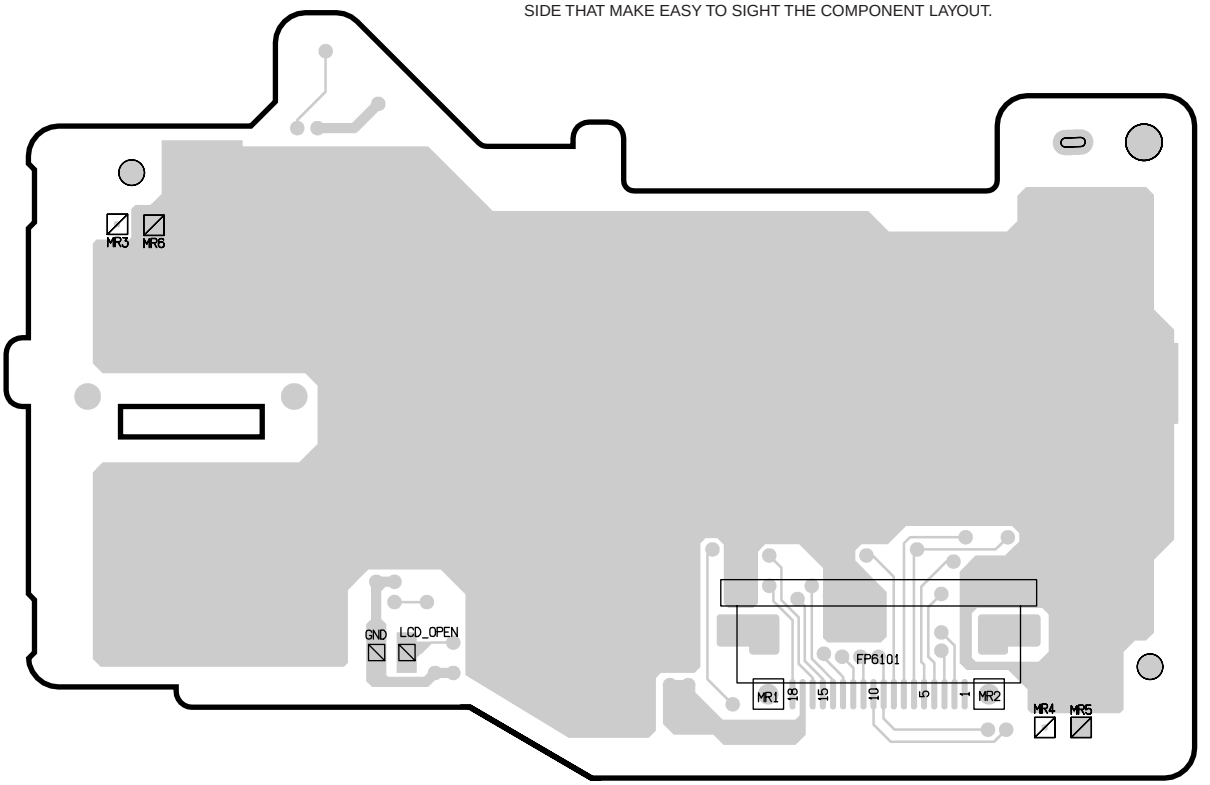
C B A

1 2 3 4

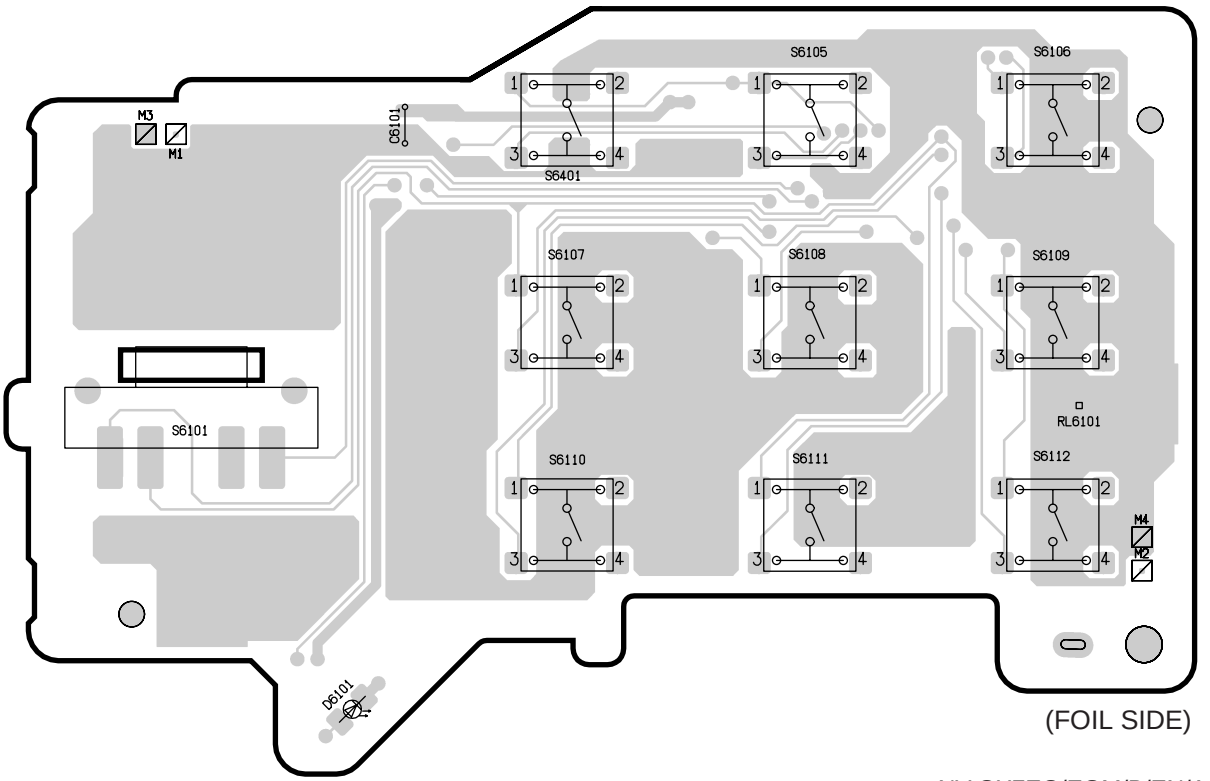
(VEP06E82A)

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

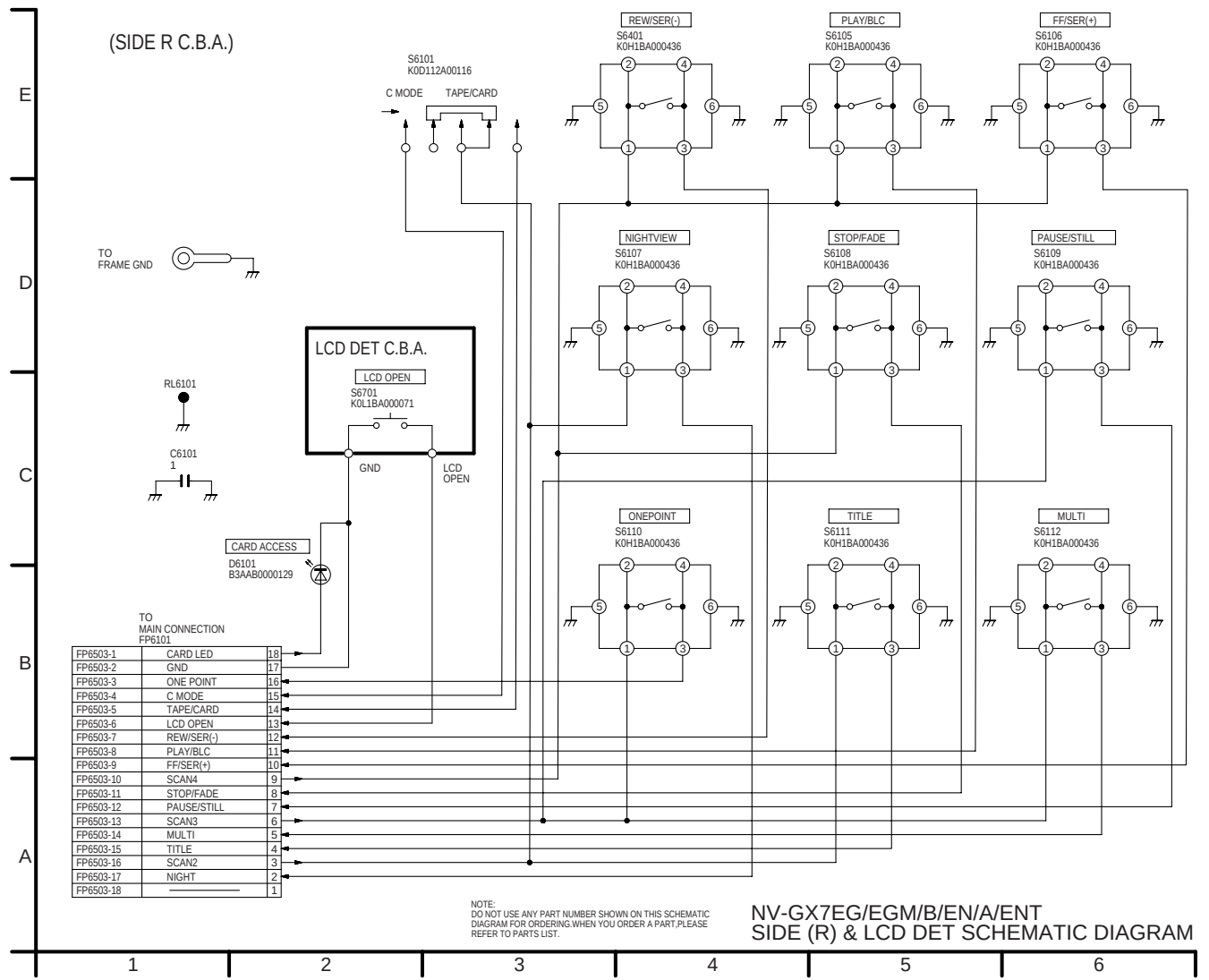


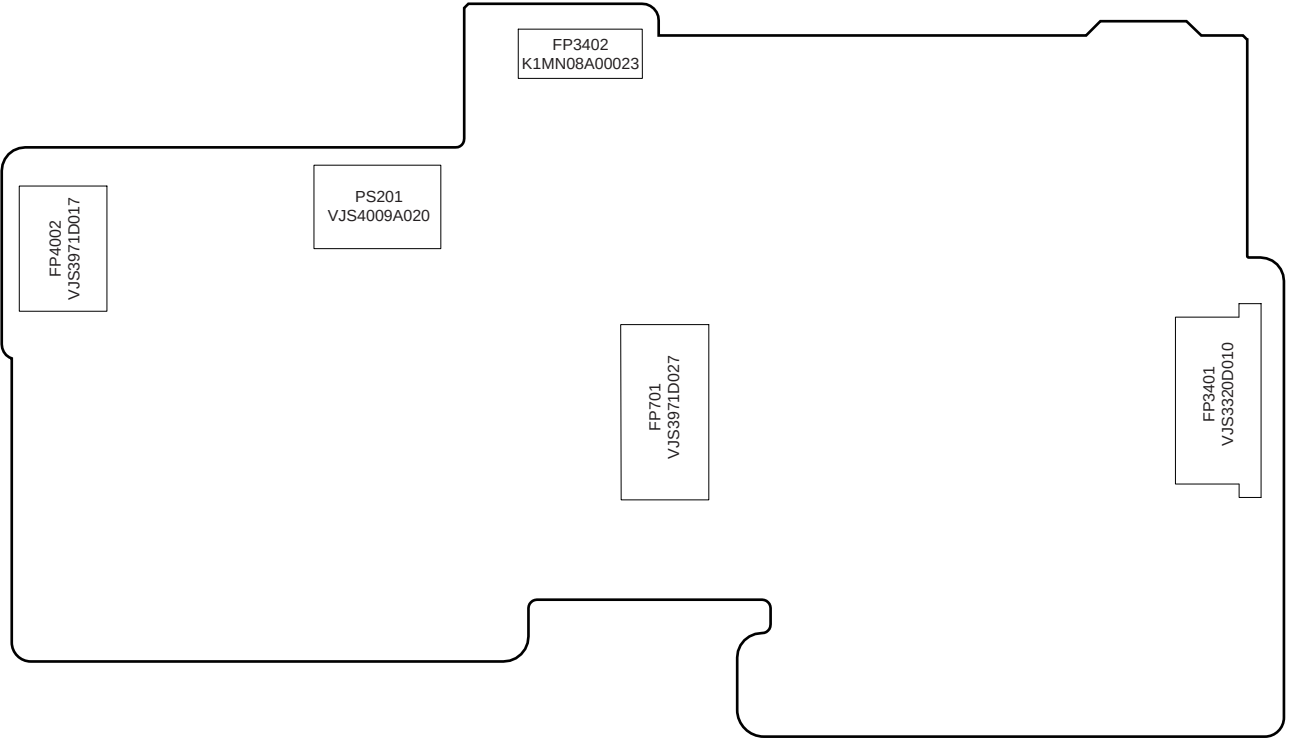
(COMPONENT SIDE)



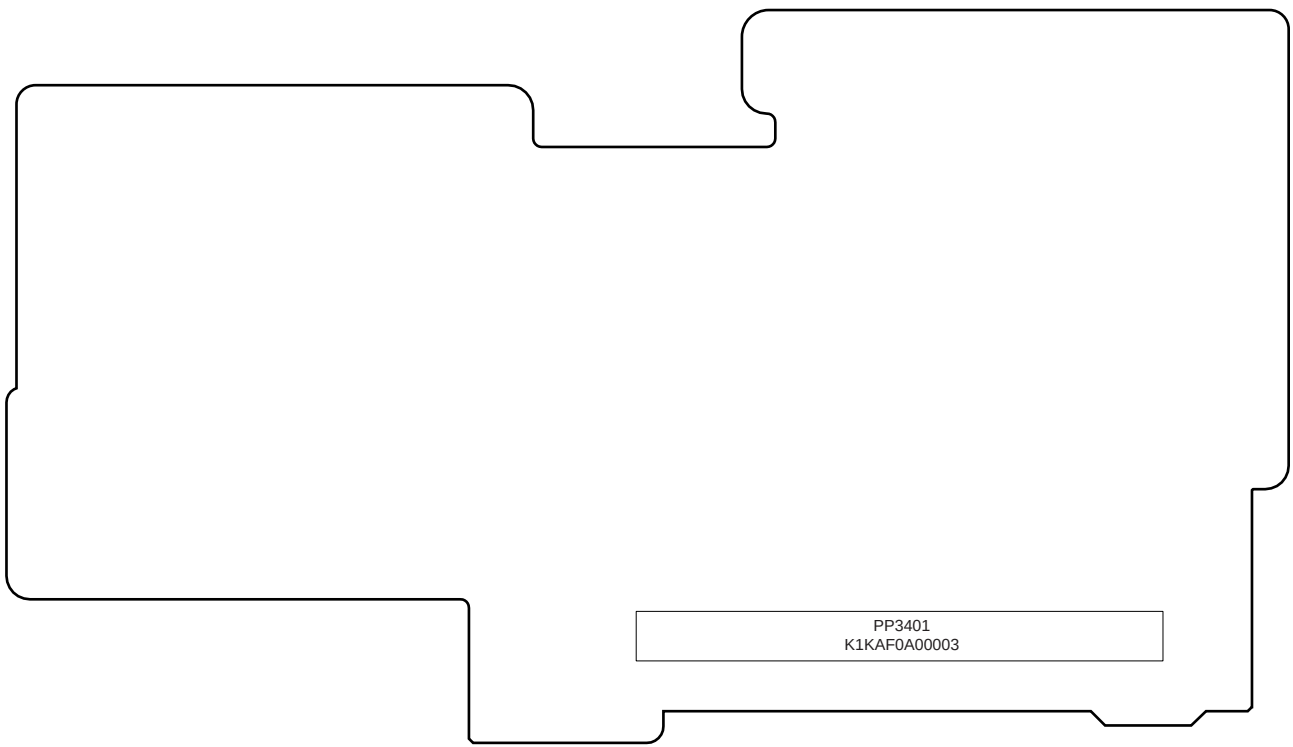
(FOIL SIDE)

NV-GX7EG/EGM/B/EN/A/ENT
SIDE (R) C.B.A.


(SIDE R C.B.A.)
S6101
K0D112A00116
C MODE
TAPE/CARD
REW/SER(-)
S6401
K0H1BA000436
PLAY/BLC
S6105
K0H1BA000436
FF/SER(+)
S6106
K0H1BA000436
TO
FRAME GND
NIGHTVIEW
S6107
K0H1BA000436
STOP/FADE
S6108
K0H1BA000436
PAUSE/STILL
S6109
K0H1BA000436
LCD DET C.B.A.
LCD OPEN
S6701
K0L1BA000071
RL6101
C6101
1
GND
LCD
OPEN
ONEPOINT
S6110
K0H1BA000436
TITLE
S6111
K0H1BA000436
MULTI
S6112
K0H1BA000436
CARD ACCESS
D6101
B3AAB0000129
TO
MAIN CONNECTION
FP6101
FP6503-1 CARD LED 18
FP6503-2 GND 17
FP6503-3 ONE POINT 16
FP6503-4 C MODE 15
FP6503-5 TAPE/CARD 14
FP6503-6 LCD OPEN 13
FP6503-7 REW/SER(-) 12
FP6503-8 PLAY/BLC 11
FP6503-9 FF/SER(+) 10
FP6503-10 SCAN4 9
FP6503-11 STOP/FADE 8
FP6503-12 PAUSE/STILL 7
FP6503-13 SCAN3 6
FP6503-14 MULTI 5
FP6503-15 TITLE 4
FP6503-16 SCAN2 3
FP6503-17 NIGHT 2
FP6503-18 1
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NV-GX7EG/EGM/B/EN/A/ENT
SIDE (R) & LCD DET SCHEMATIC DIAGRAM
E
D
C
B
A
1
2
3
4
5
6



(COMPONENT SIDE)



(FOIL SIDE)

Service Manual

ORDER NO. VMD0109026C8

Service Manual

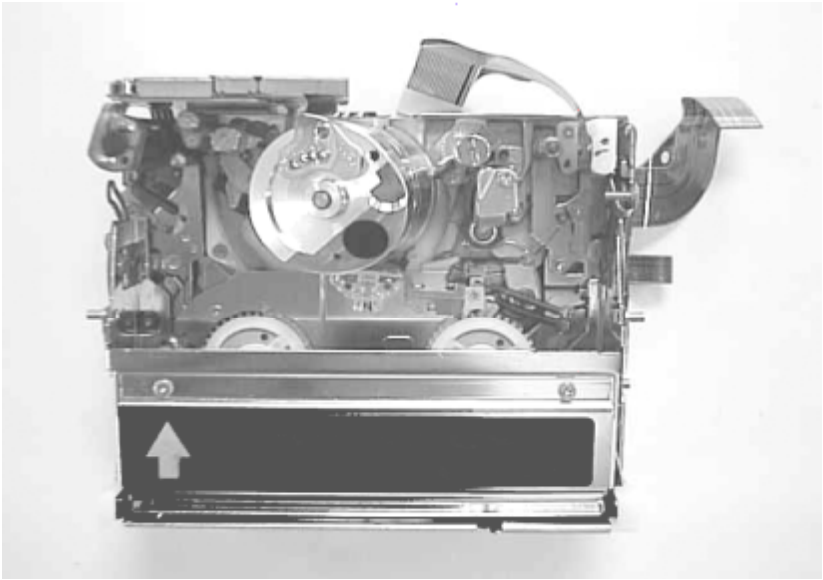
Digital Video Camera/Recorder

Panasonic Mini DV

- Q-MECHANISM

(Including Q1, Q2&Q3)

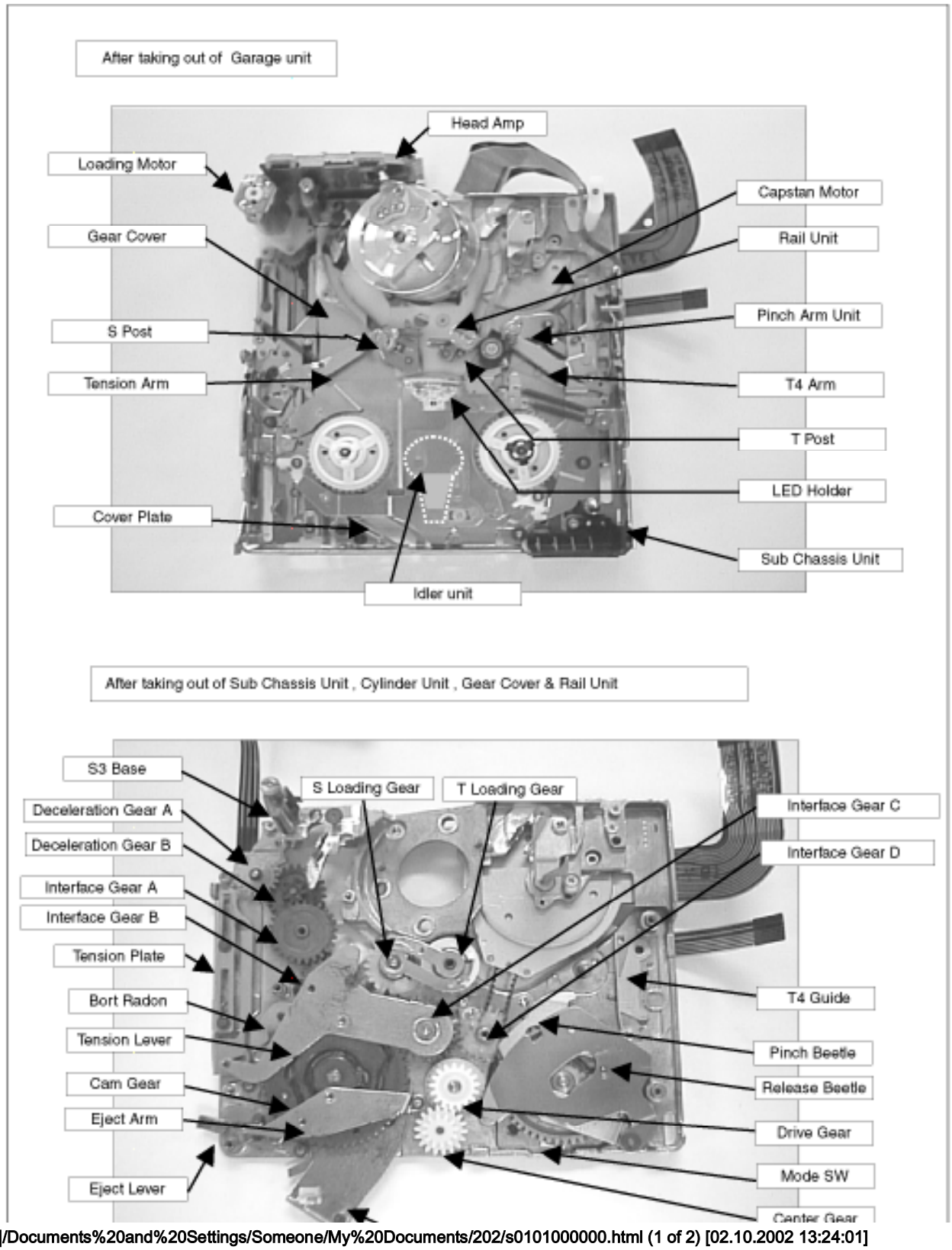
Disassembly/Assembly Procedures
Adjustment Procedures



Panasonic

1.1 UPPER SIDE

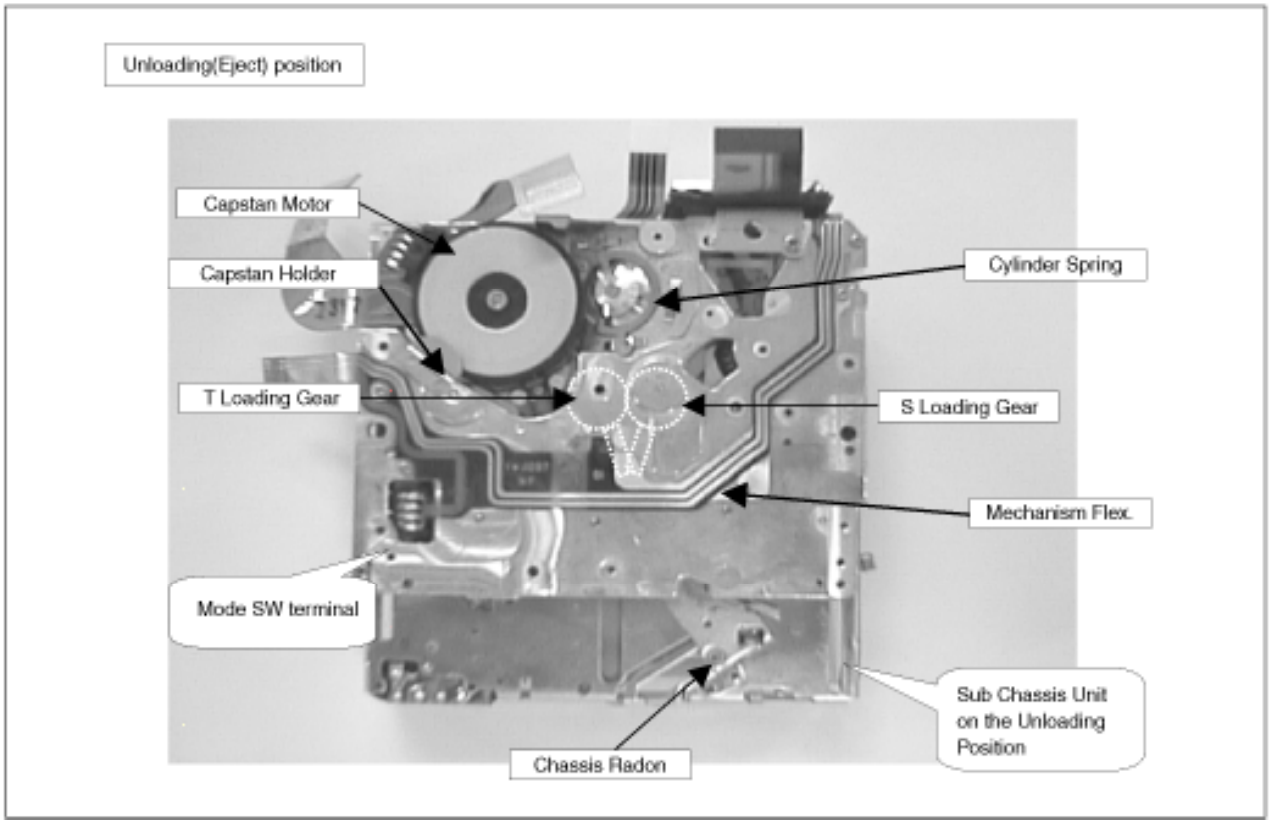
TOP PREVIOUS NEXT



TOP PREVIOUS NEXT

1.2 BOTTOM SIDE

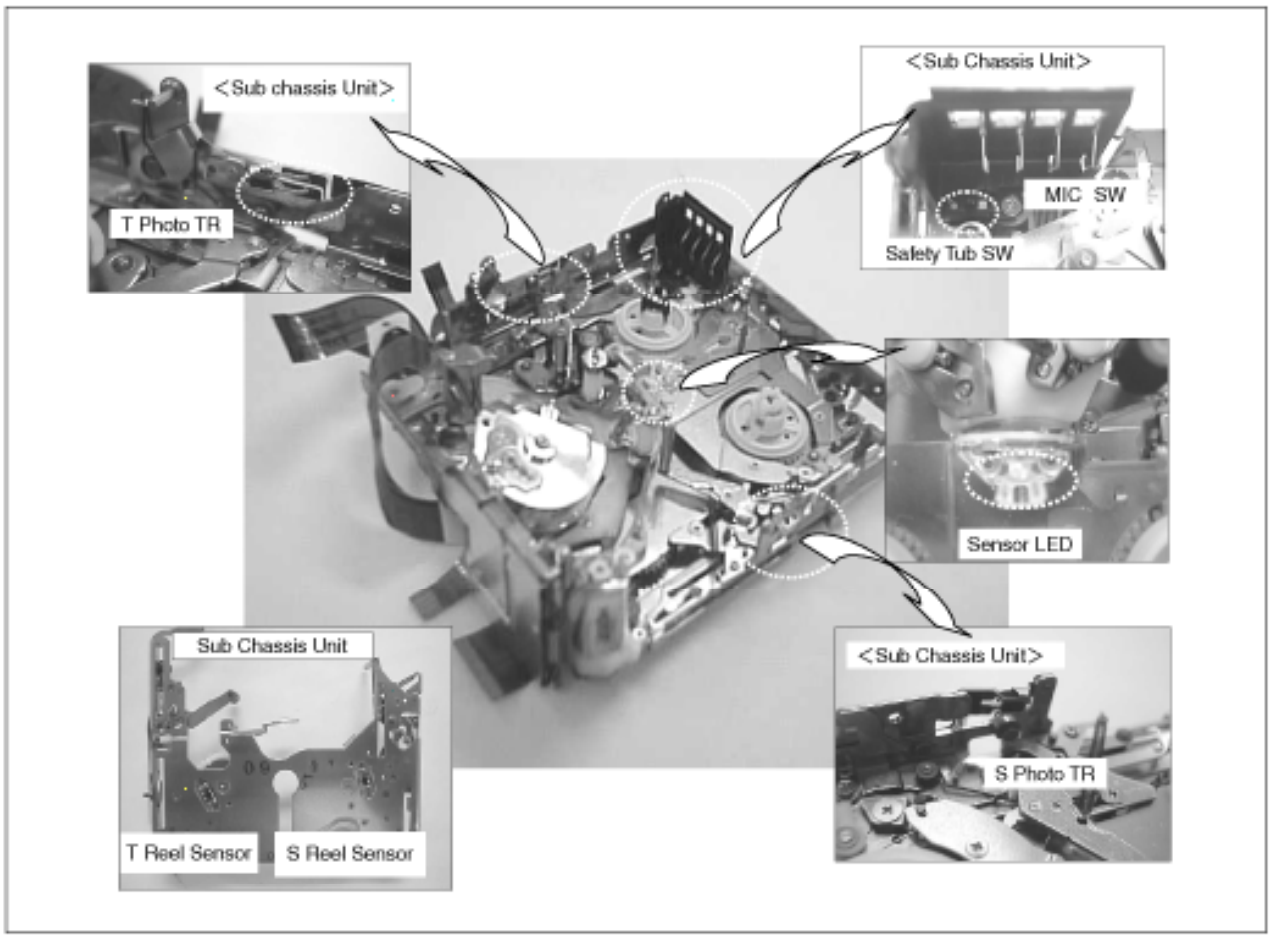
TOP PREVIOUS NEXT



TOP PREVIOUS NEXT

1.3 SENSOR POSITION

TOP PREVIOUS NEXT

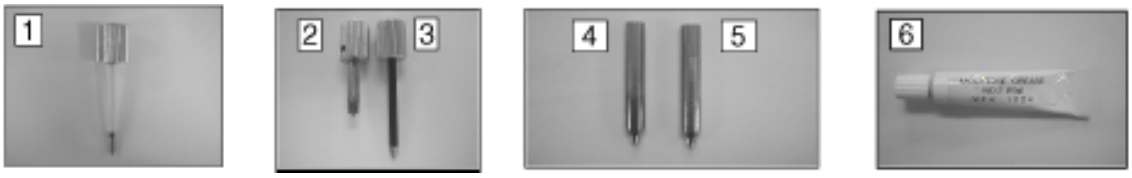


TOP PREVIOUS NEXT

2.1 FIXTURES& TOOLS FOR DISASSEMBLY& ASSEMBLY

TOP PREVIOUS NEXT

No.	Parts number	Parts Name	Q´ty	New	Remarks
1	VFK1390	Precision Driver	1	•	
2	VFK1444	Gear Driver	1	•	
3	VFK1444Q2	Gear Driver for Q2 & Q3mecha.	1	•	
4	VFK1650	Cut Washer Jig(0.86)	1	•	
5	VFK1649	Cut Washer Jig(0.65)	1	•	
6	VFK1024	Molytone Grease	1	•	

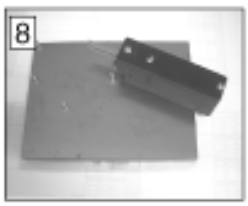


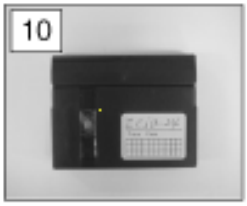
TOP PREVIOUS NEXT

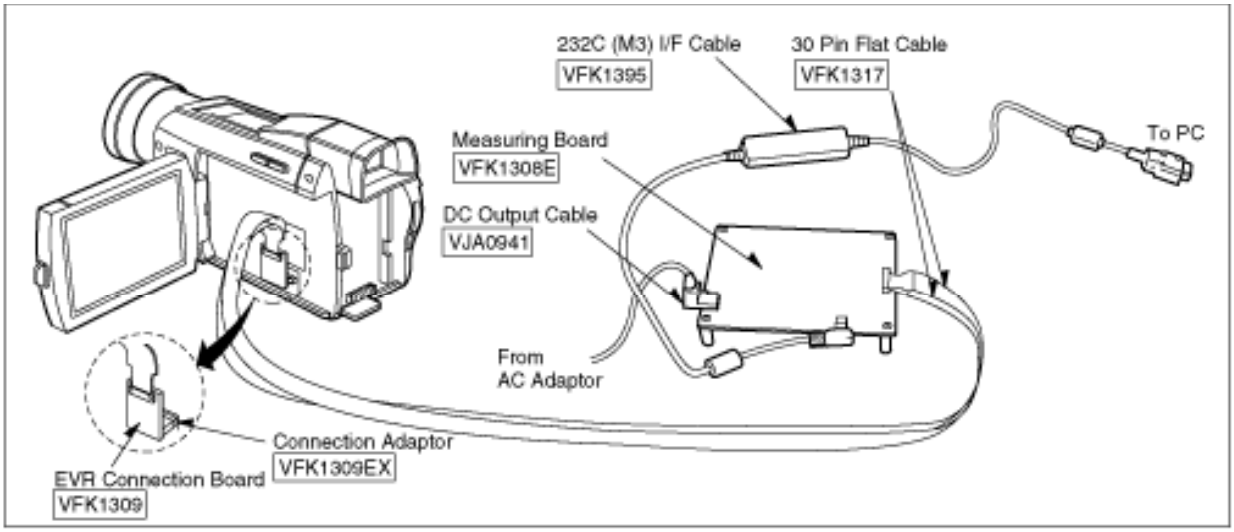
2.2 FIXTURES&TOOLS FOR MECHANICAL ADJUSTMENT

TOP PREVIOUS NEXT

No.	Parts number	Parts Name	Q´ty	New	Remarks
7	VFK1278	Post Adjustment Driver	1	•	
8	VFK1638	Capstan Tilt Adj. Jig	1	•	
9	VFK1641	Envelope Detecor Board	1	•	
10	VFM3110EDS(PAL)	DV Alignment Tape	1	--	or VFM3010EDS(NTSC)
11	VFK1395	232C(M3) I/F Cable	1	--	"TATSUJIN" system
12	VFK1308E	Measuring Board	1	--	"TATSUJIN" system
13	VFK1309	EVR Connecor Board	1	--	"TATSUJIN" system
14	VFK1309EX	Connection Adaptor		--	"TATSUJIN" system
15	VFK1317	30pin Flat Cable	2	--	or VFK1517(New - 300mm) "TATSUJIN" system
16	VJA0941	DC Output Cable	1	--	"TATSUJIN" system







2.3 MAINTENANCE FOR CAPSTAN TILT ADJUSTMENT JIG.

TOP PREVIOUS NEXT

1. Keep applying oil for preventive oxidation on base block.

   Glove should be used when you apply oil.

2. Do not apply pressure to this jig.

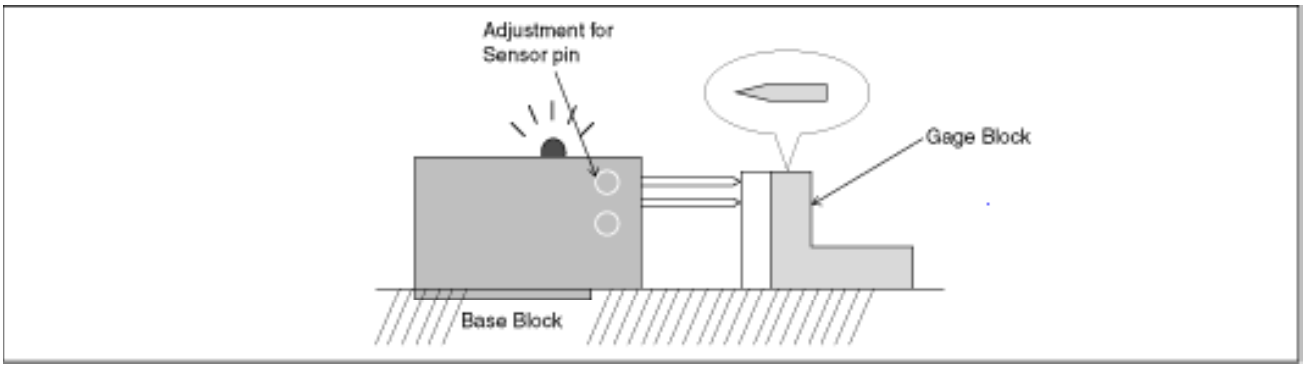
3. If Brightness of LED become weak, Battery (SUM4 X 2) in the top of box should be changed.

4. Inspect sensor pin regularly as following.

   A. Put Gage Block to sensor pin.

   B. Confirm LED is lit.

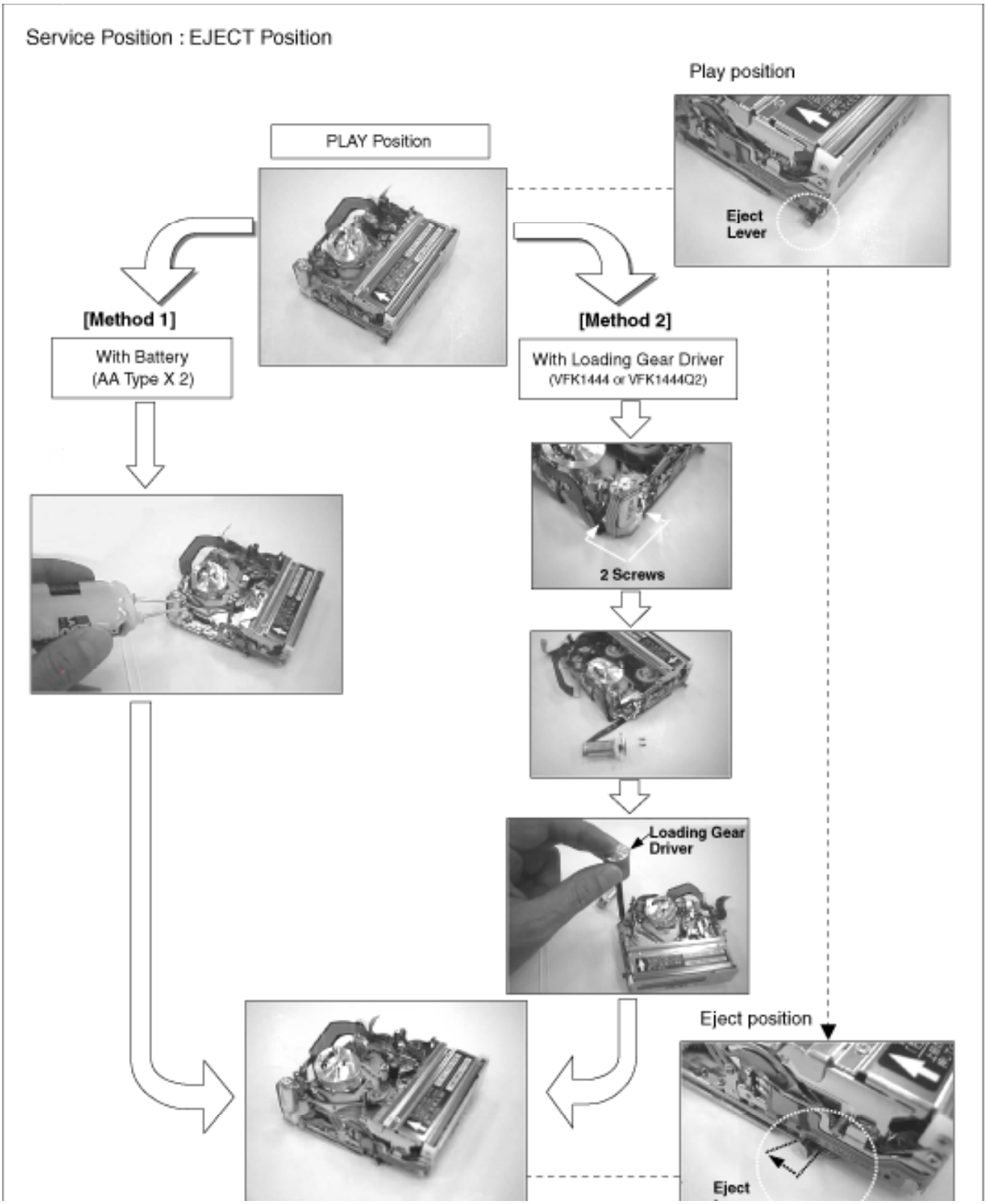
      If not, adjust sensor pin by rotating a screw.

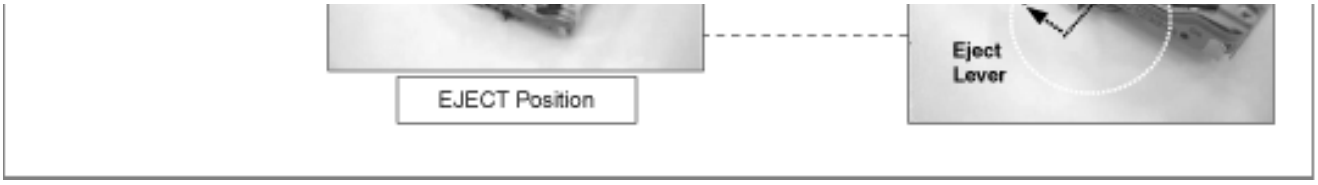


TOP PREVIOUS NEXT

3.1 PREPARATION FOR DISASSEMBLY

TOP PREVIOUS NEXT





TOP PREVIOUS NEXT

3.2 DISASSEMBLY PROCEDURE

TOP PREVIOUS NEXT

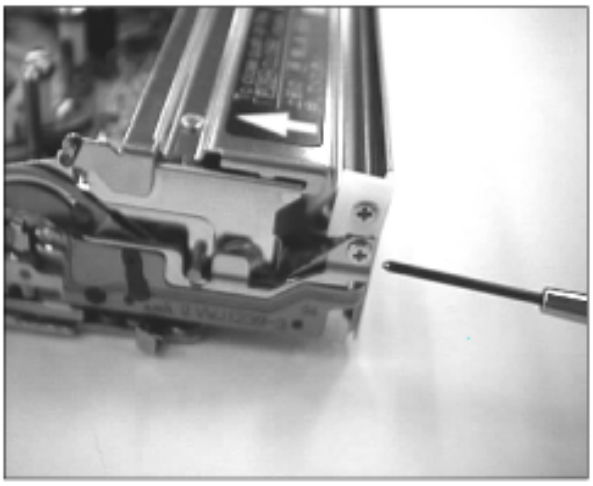
No.	Item	Fig.	Procedure
1	Cassette Up Unit.	Fig. D1-1	1) Remove 3 screws. (Q1 &2 have 4 screws)
		Fig. D1-2	2) Take coupling portion off from both S &T sides.
*2	H Amp Unit./(Only Q1 & Q2)	Fig. D2-1	1) Remove a screw from Shield case.
		Fig. D2-2	2) Take Cylinder Flex. From connector.
		Fig. D2-3	3) Remove a screw from H Amp Angle.
3	Cylinder Unit & RT Flex. Flame.	Fig. D3-1	1) Remove a screw from RT Flex. Flame.
		Fig. D3-2	2) Remove 3 screws and then take Cylinder Spring out.
		Fig. D3-3	3) Remove a screw and take RT Flex. Flame out.
4	LED Holder, Cover plate & Idler U.	Fig. D4-1	1) Pull up and remove LED Holder.
		Fig. D4-2	2) Move LED Flat Cable out of position and unhook 2 springs.
		Fig. D4-3	3) Remove 5 screws and remove Cover Plate & Idler U.
5	Sub Chassis Unit	Fig. D5-1	1) Remove 4 screws.
		Fig. D5-2	2) Remove a screw and unhook a spring from Pinch Arm.
6	Pinch Arm & Center Gear	Fig. D6-1	1) Remove Cut Washer and take Pinch Arm out. 2) Take Center Gear out.
		Fig. D6-2	3) Take Center Gear Spacer out.
7	Rail Unit	Fig. D7-1	1) Make half loading until / Connection Arm comes out.
		Fig. D7-2	2) Disconnect Connection Arms. a) Hold Loading Gear side. b) Disconnect connection arms.
		Fig. D7-3	3) Remove 4 screws.
8	T-Loading Gear & S-Loading Gear	Fig. D8	1) Take T-Loading Gear out. 2) Remove Cut Washer on S-Loading Gear and take S-Loading Gear out. * Removed Cut Washer can not be used again.
9	Gear Cover	Fig. D9	1) Remove a screw and slide Gear Cover to take out.
10	Pinch Beetle & Release Beetle	Fig. D10	1) Remove a washer and take Pinch Beetle and Release Beetle out together.
11	Tension Lever & Eject Arm.	Fig. D11	1) Remove a screw and take Tension Lever out. 2) Remove a washer and take Eject Arm out.
12	Interface Gears	Fig. D12	1) Remove 4 Gears.
13	Cam Gear	Fig. D13	1) Remove Cam Gear.

14	Chassis Radon	Fig. D14	1) Remove a washer.
15	Boat Radon	Fig. D15	1) Remove Boat radon.
16	Drive Gear	Fig. D16	1) Remove Drive Gear and a White Waher underneath.
17	Capstan Holder & Capstan Motor	Fig. D17-1	1) Remove 2 screws and take Capstan Holder out. * It is not necessary to remove 2 screws for New Capstan Holder. Because it shapes screw.
		Fig. D17-2	2) Remove 3 screws and take Capstan Motor out downword.
18	Loading Motor unit & Mechanism Interface Flex.	Fig. D18-1	1) Remove 2 screws and take Loading Motor Unit out.
		Fig. D18-2	2) Remove 4 screws and dissolder at Mode Sw.
*19	Mode Switch , Deceleration Gears & Tension Plate.	Fig. D19	1) Take Mode Sw out. 2) Remove a washer and take Deceleration Gear (A) out. 3) Take Deceleration Gear (B) out. 4) Remove 2 washers and take Tension Plate.
*20	T4 Guide , Eject Lever , Pulley Cover & Pulley.	Fig. D20-1	1) Remove a screw and take T4 Guide out.
		Fig. D20-2	2) Remove a washer and take Eject Lever out.
		Fig. D20-3	3) Remove 2 screw and take Pulley Cover out. 4) Take Pulley out.
*21	S3 Base U.	Fig. D21	1) Remove a screw for S3 adjustment and take S3 Base U.

* 1) Procedure 2 for H.Amp Unit is applied only Q1 & Q2 / mechanism. 2) Procedure 19 - 21 can be changed in order.

Fig. D1-1

1/3 (Left)
* Lower one



2/3 (Front)
* Q1 & Q2 : 2screws

3/3 (Right)
* Lower one

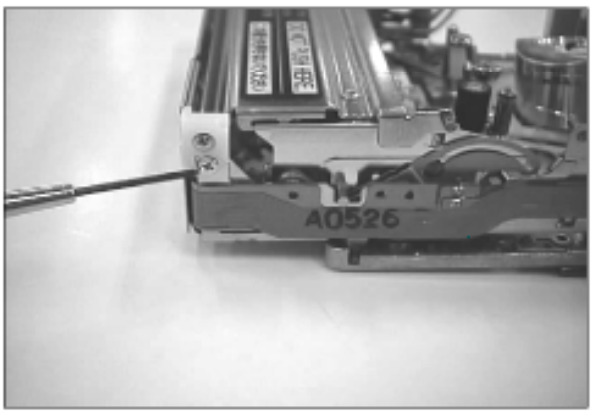


Fig. D1-2

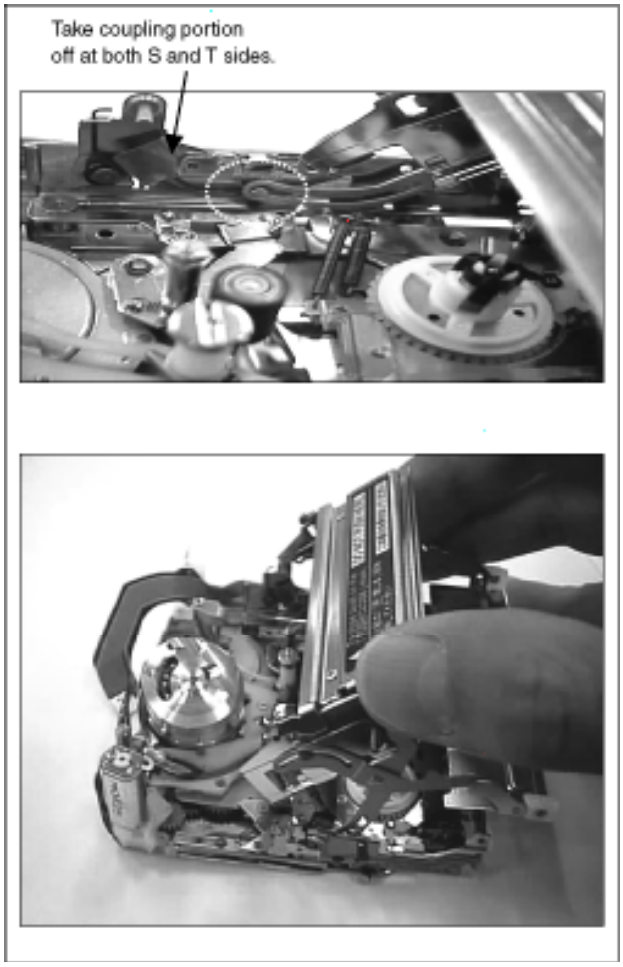


Fig. D2-1

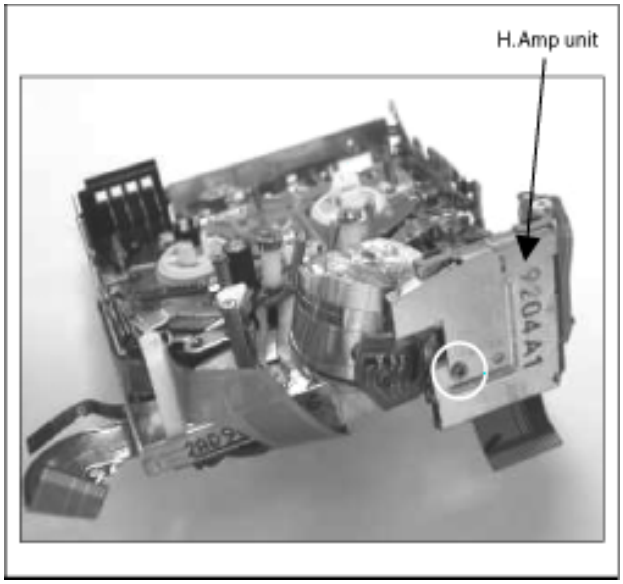


Fig. D2-2

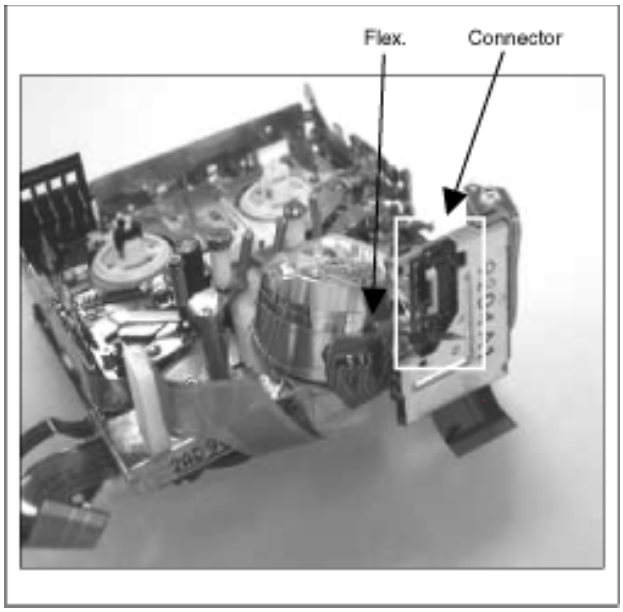


Fig. D2-3

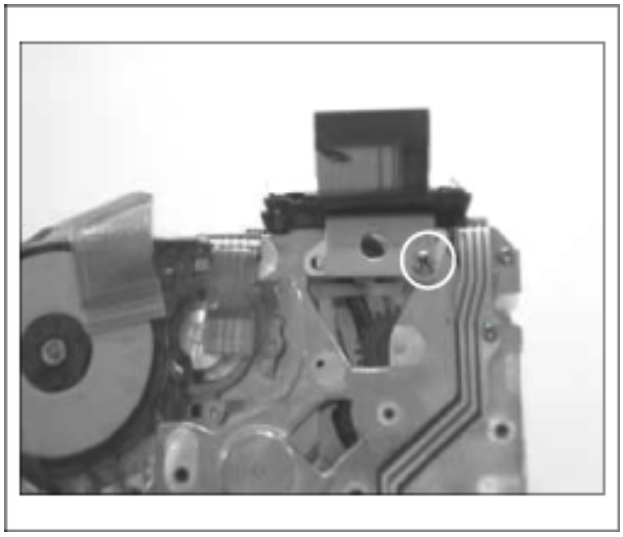


Fig. D3-1

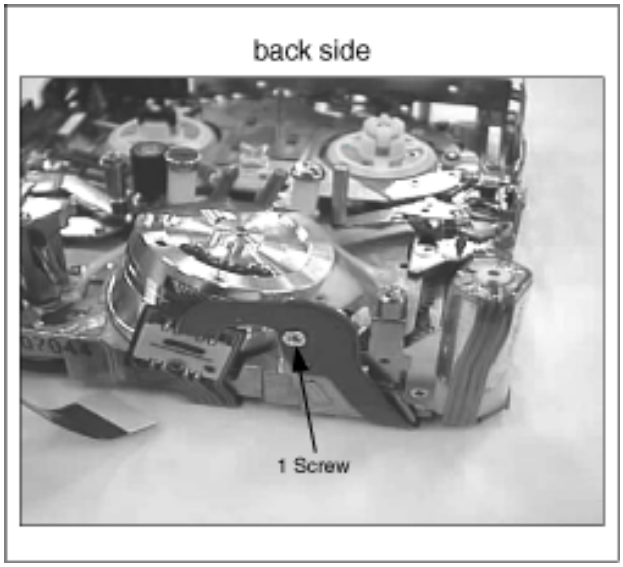


Fig. D3-2

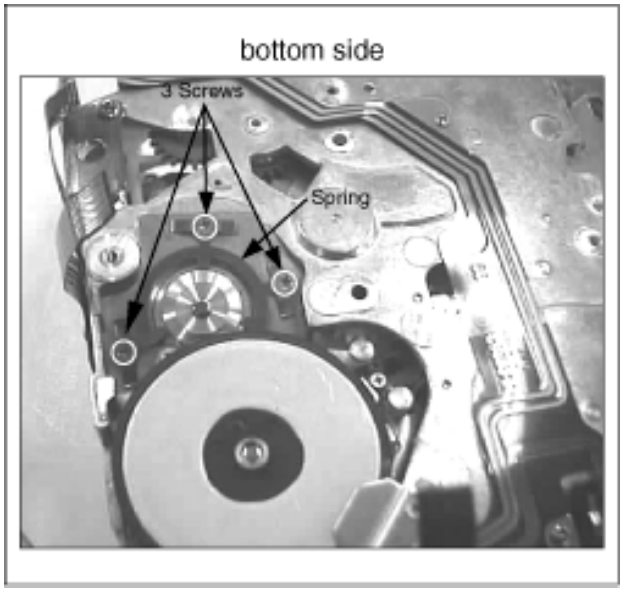


Fig. D3-3

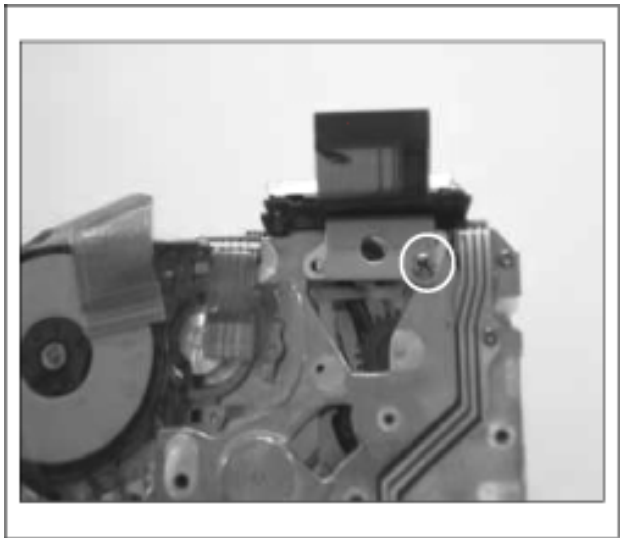


Fig. D4-1

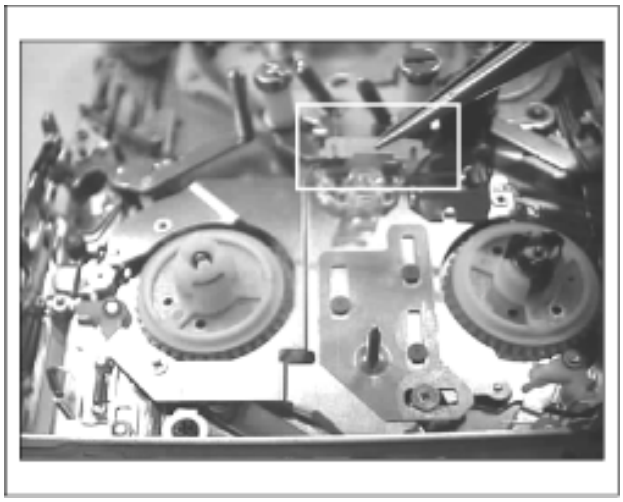


Fig. D4-2

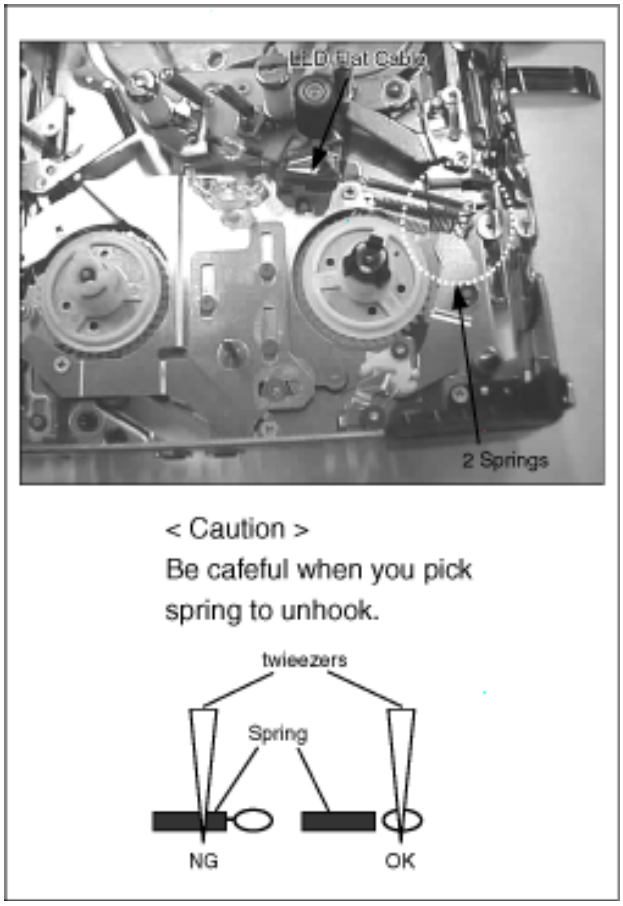

LED Flat Cable
2 Springs
< Caution >
Be cafeful when you pick
spring to unhook.
twieezers
Spring
NG
OK

Fig. D4-3

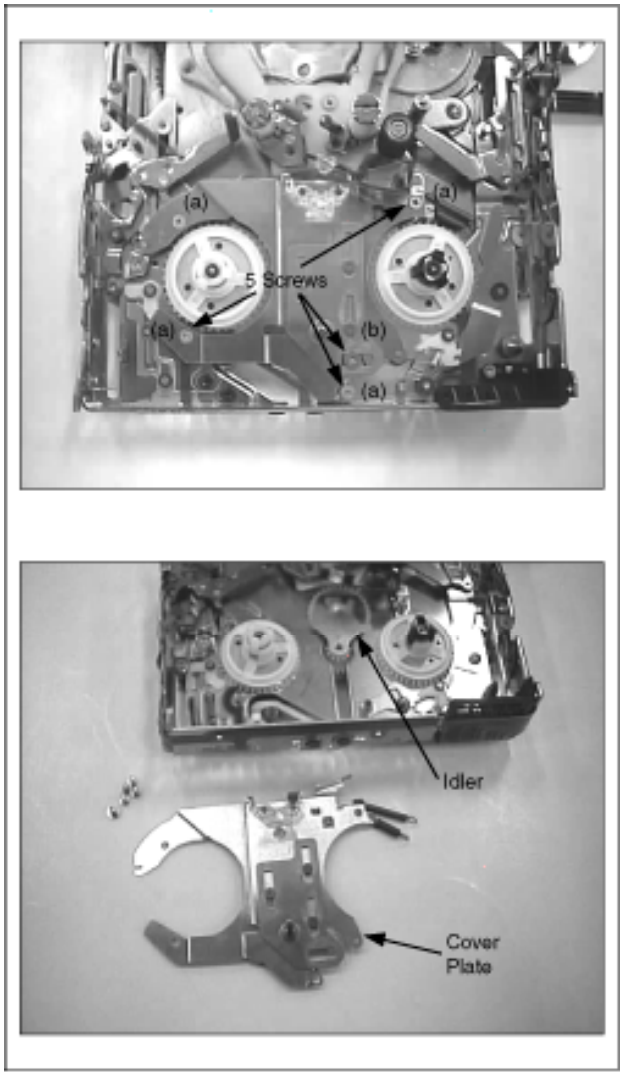


Fig. D5-1

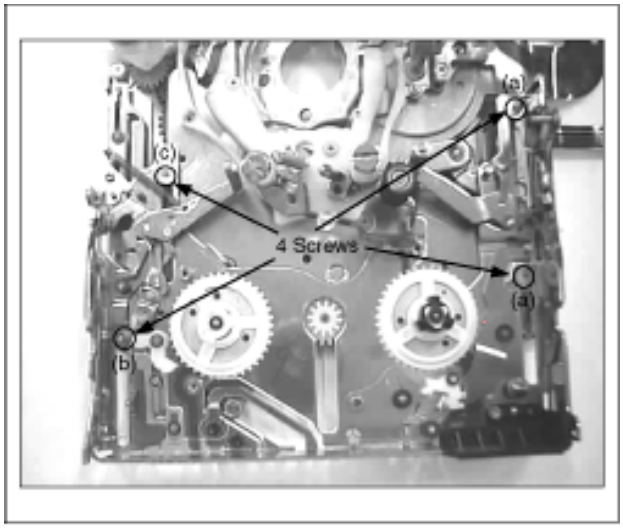


Fig. D5-2

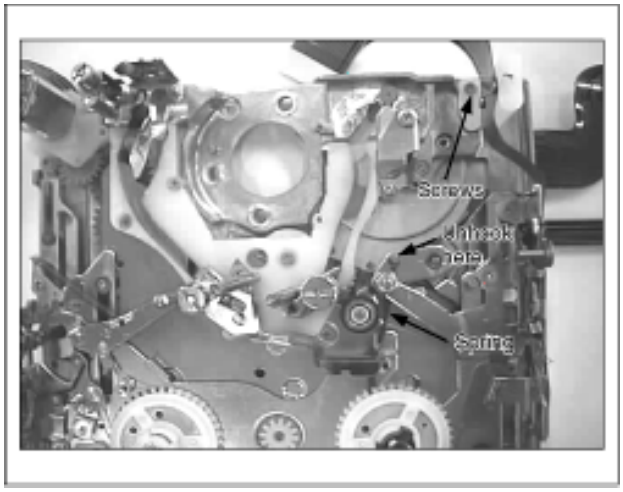


Fig. D6-1

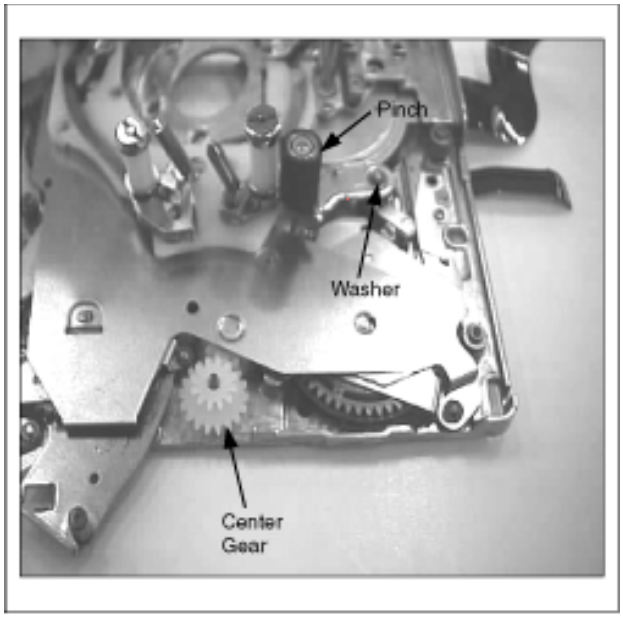


Fig. D6-2

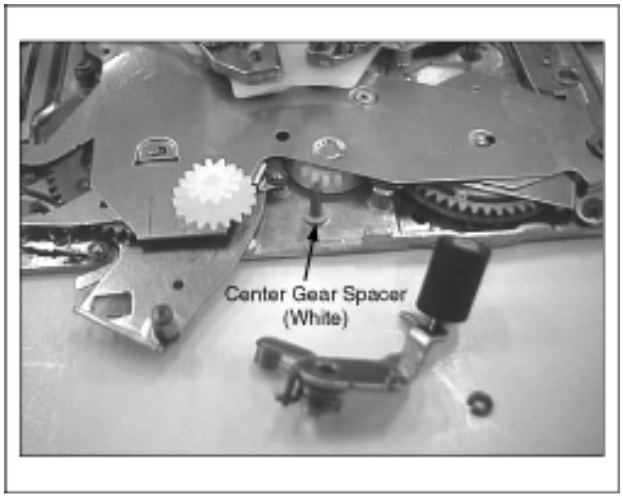


Fig. D7-1

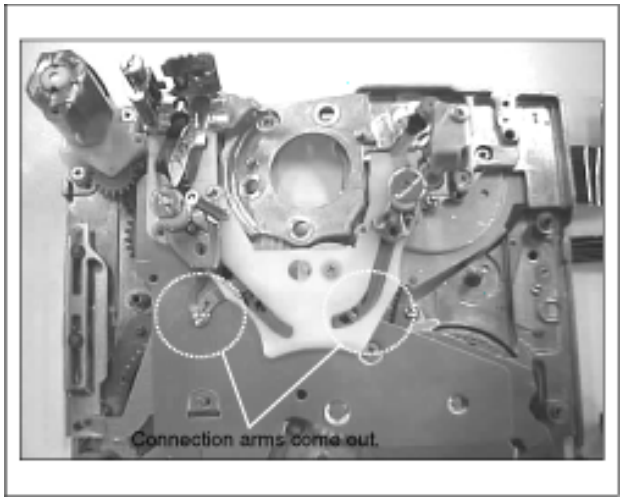


Fig. D7-2

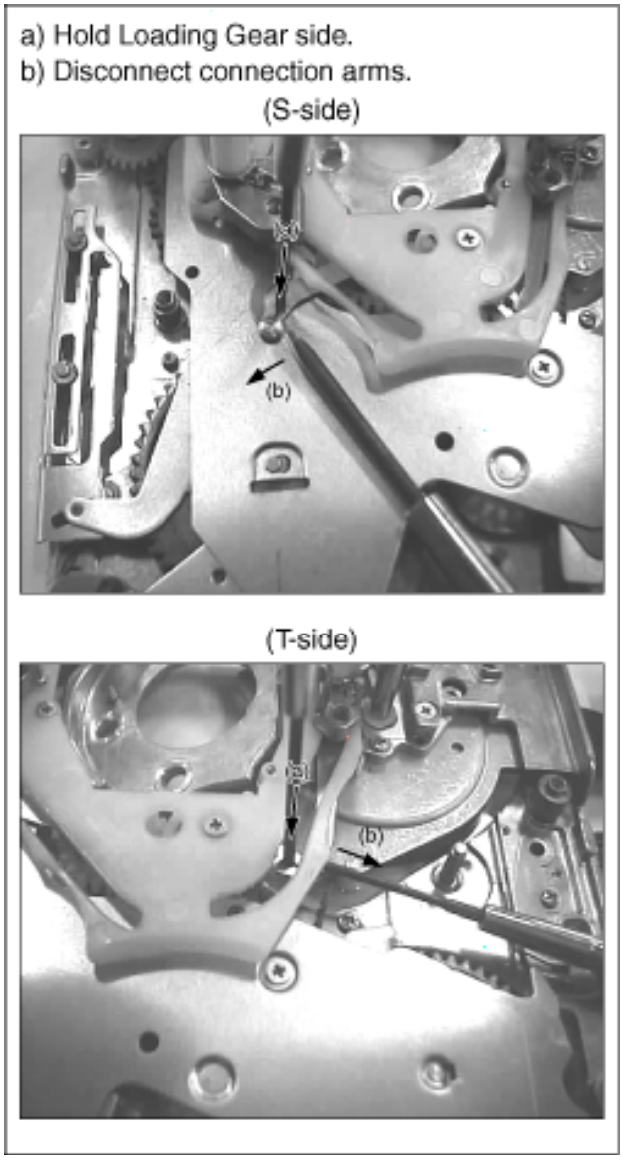

a) Hold Loading Gear side.
b) Disconnect connection arms.
(S-side)
(a)
(b)
(T-side)
(a)
(b)

Fig. D7-3

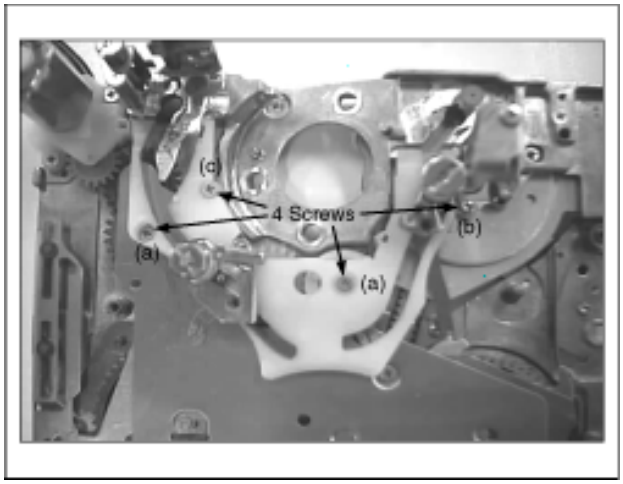

(c)
4 Screws
(b)
(a)
(a)

Fig. D8

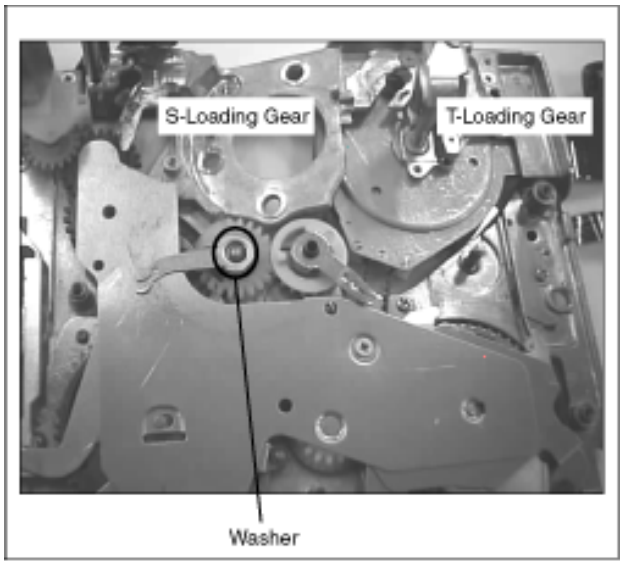


Fig. D9

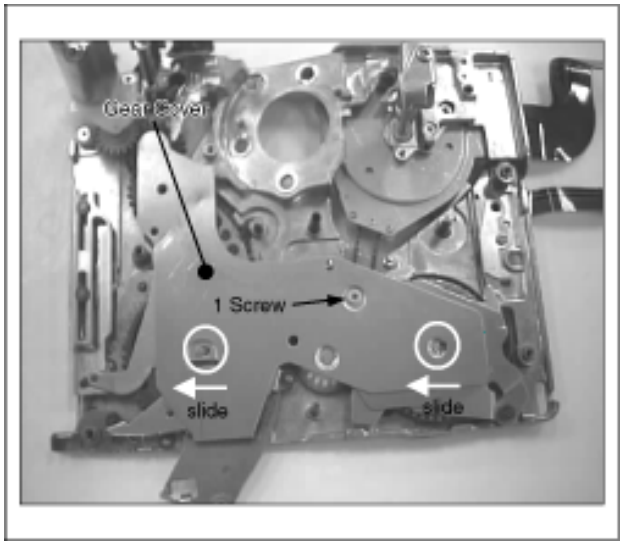


Fig. D10

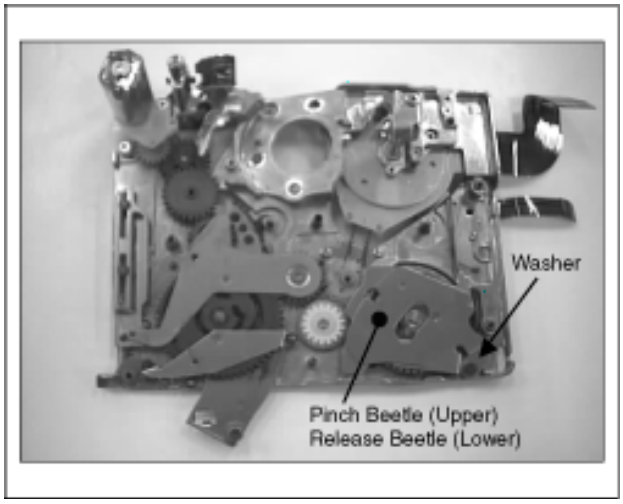


Fig. D11

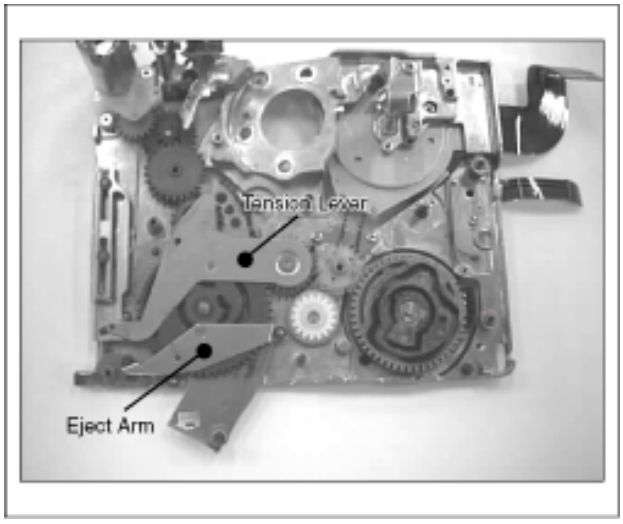


Fig. D12

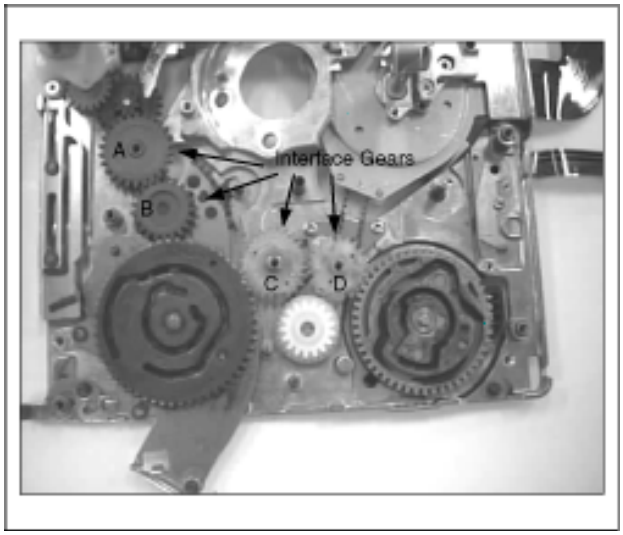


Fig. D13

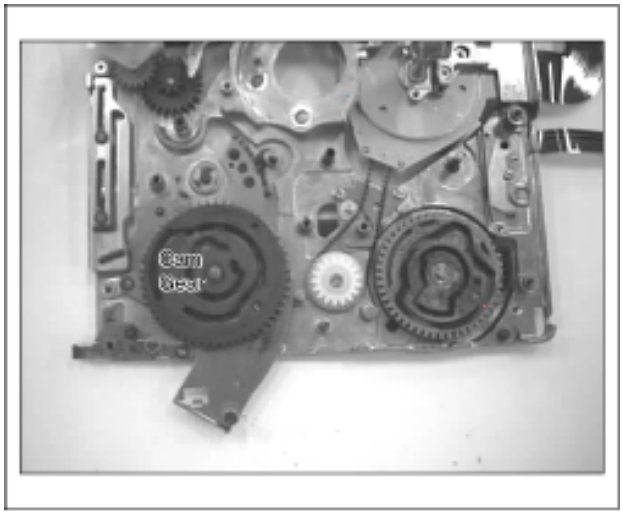


Fig. D14

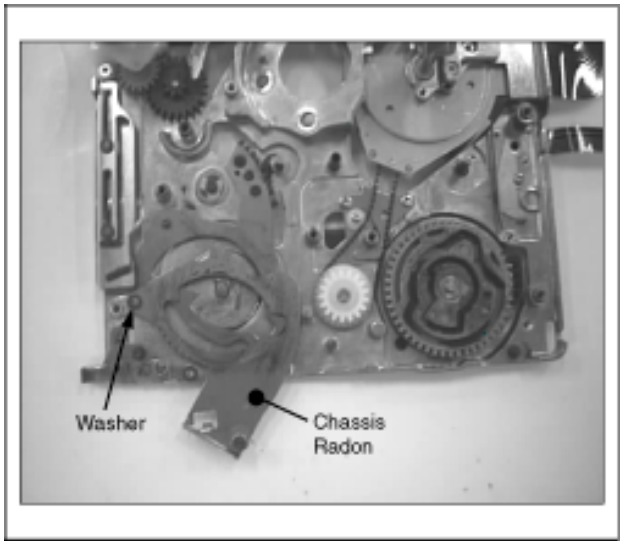


Fig. D15

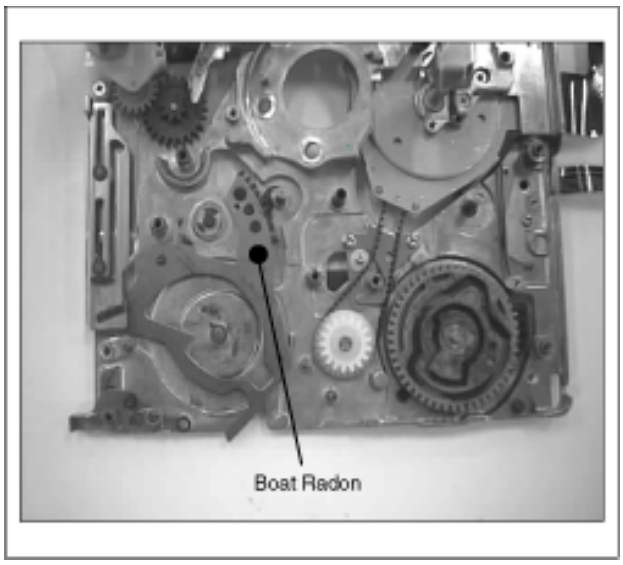


Fig. D16

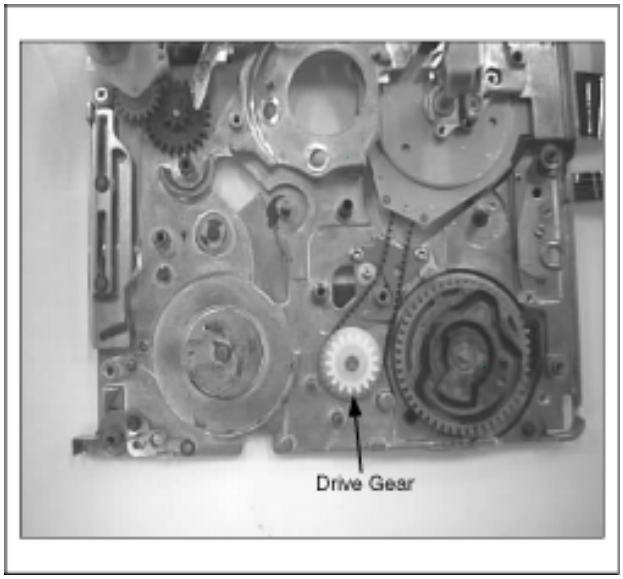


Fig. D17-1

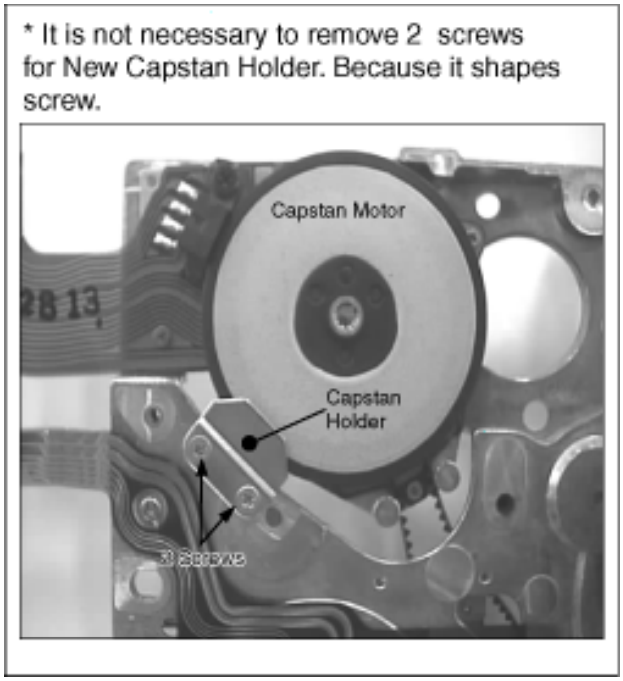


Fig. D17-2

Fig. D18-1

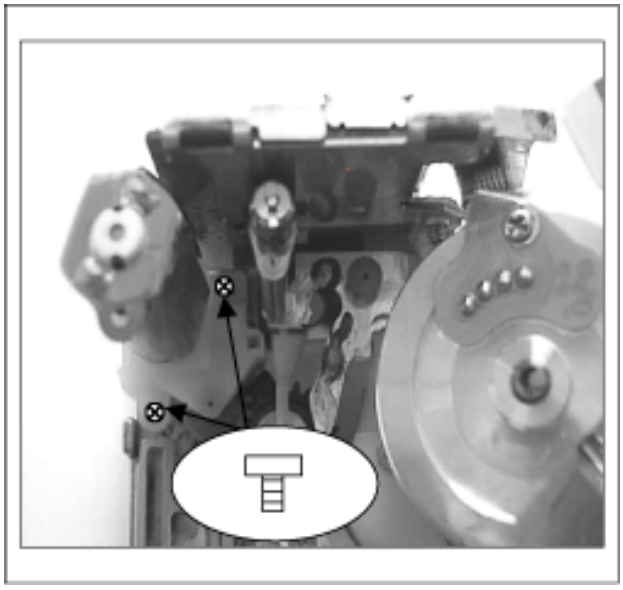


Fig. D18-2

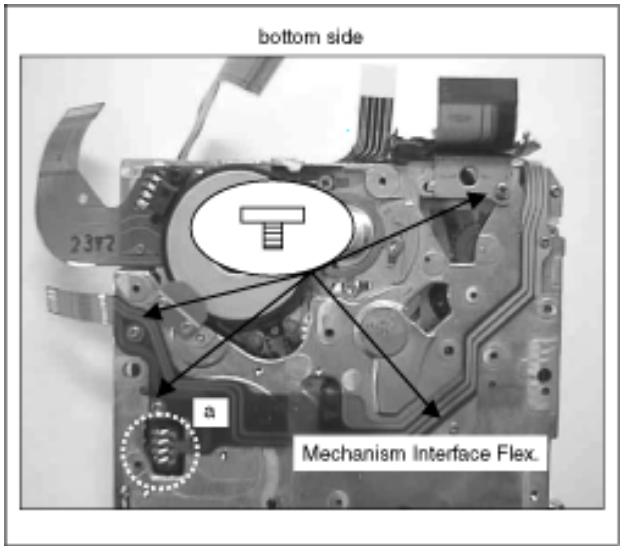


Fig. D19

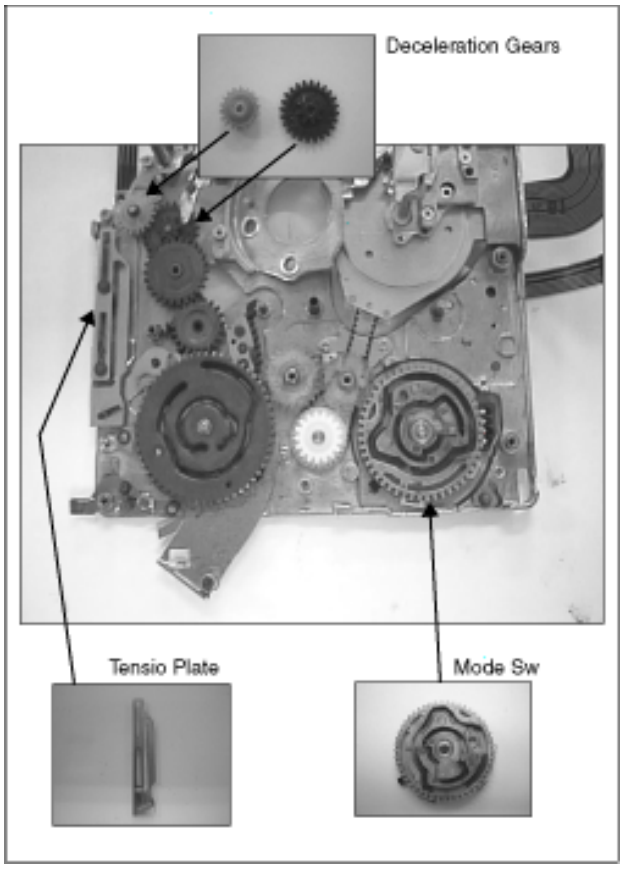


Fig. D20-1

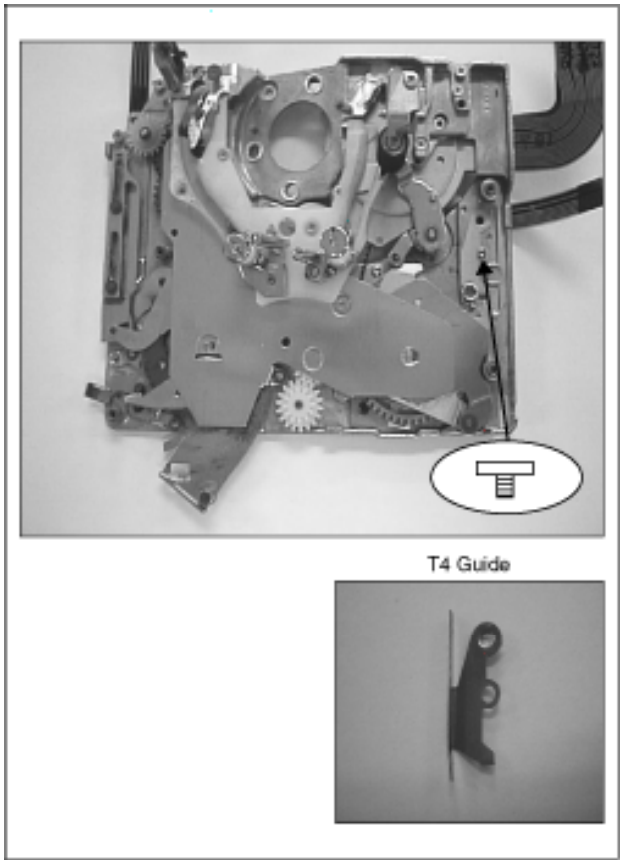


Fig. D20-2

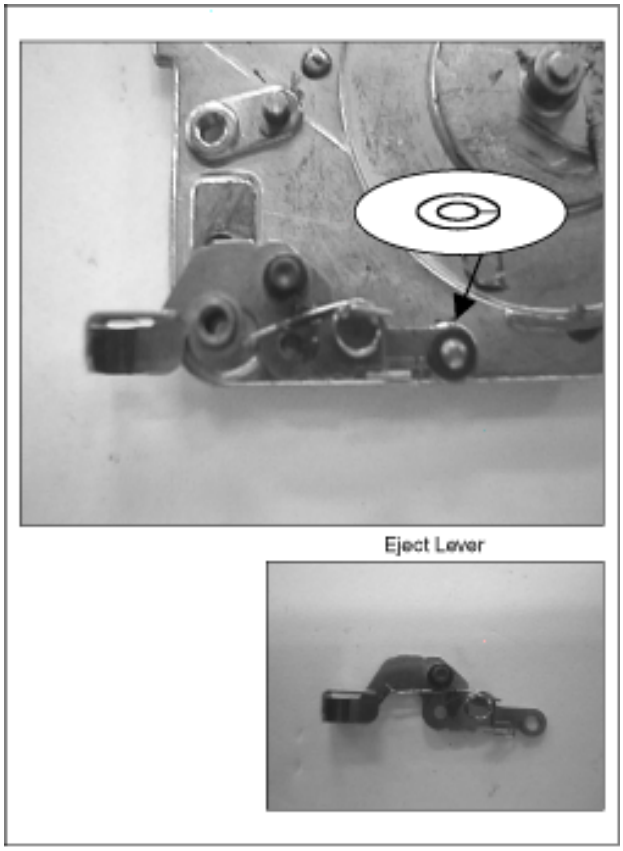


Fig. D20-3

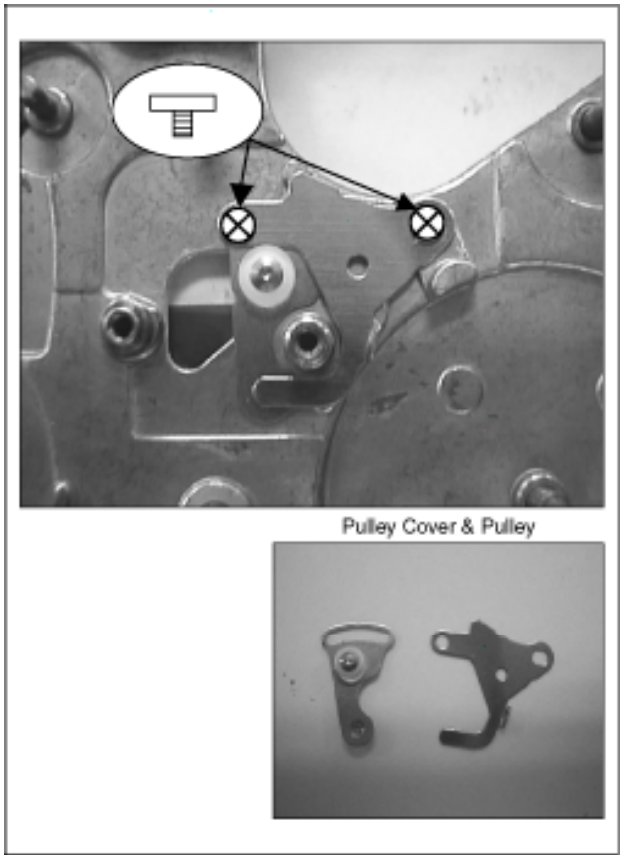
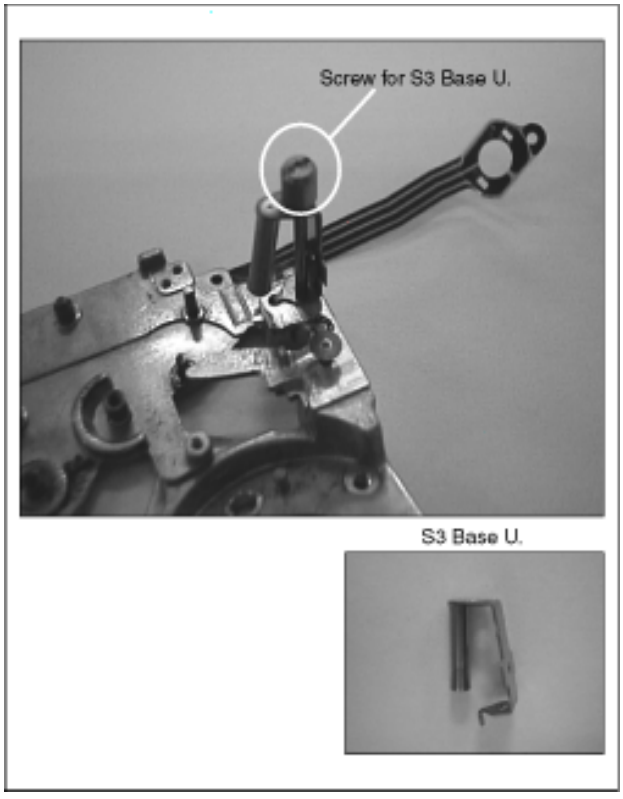


Fig. D21



4.1 ASSEMBLY PROCEDURE

TOP PREVIOUS NEXT

* 1) Procedure 20 for H.Amp Unit is applied only Q1 & Q2 mechanism.

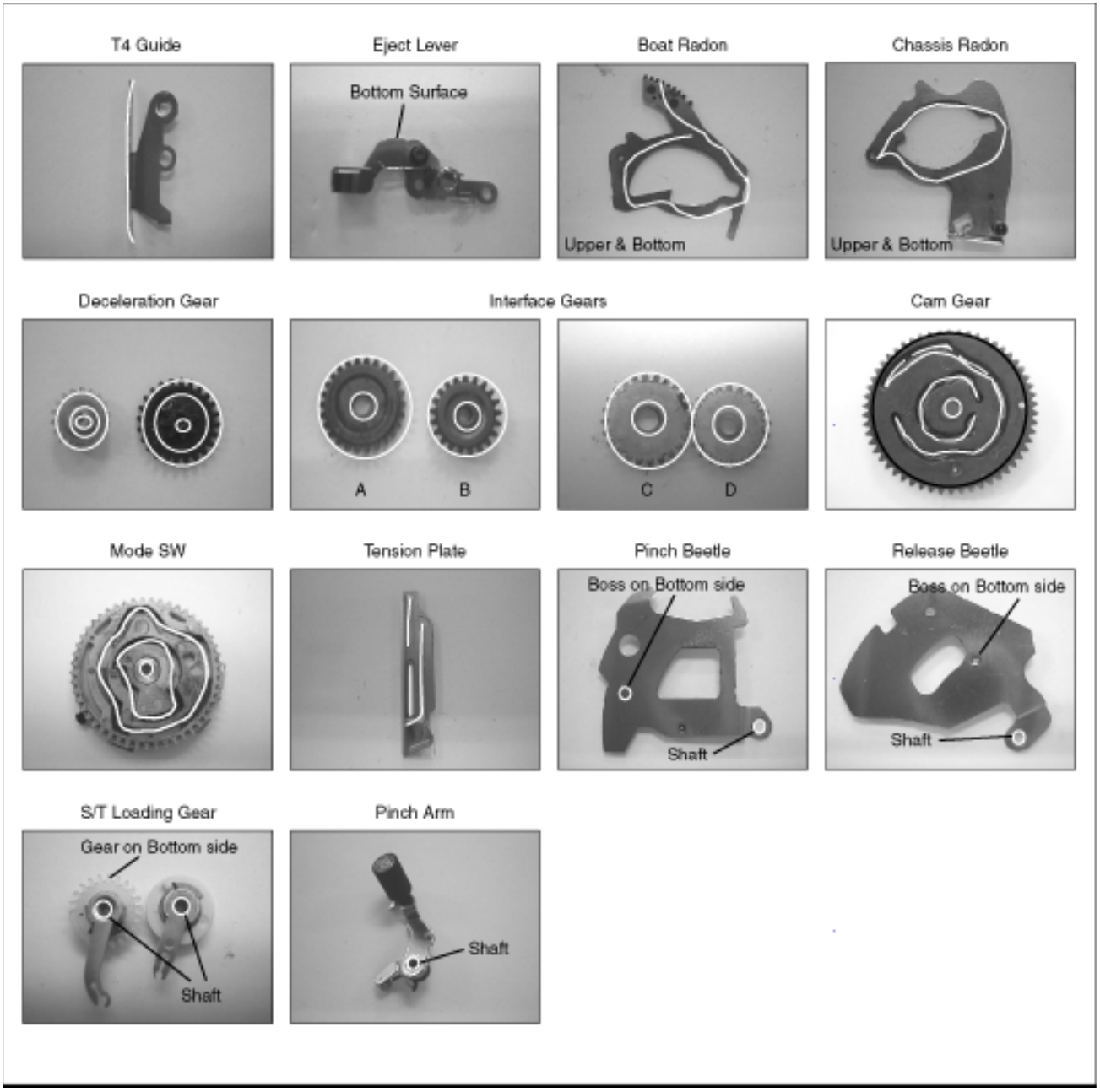
2) Procedure 1 - 3 can be changed in order.

No.	Item	Fig.	Grease	Procedure
*1	S3 Base U.	Fig. A1	--	1) Put S3 Base U on and tighten a screw.
*2	T4 Guide , Eject Lever, Pulley Cover & Pulley.	Fig. A2-1	•	1) Put hole of T4 Guide to hole of chassis and tighten a screw.
		Fig. A2-2	•	2) Put Eject Lever on and a washer.
		Fig. A2-3	--	3) Put boss of Pulley to hole of chassis on. Hole of chassis under pulley should be visible through slit of Pulley.
		Fig. A2-4	--	4) Put Pulley Cover on Pulley and tighten 2 screws.
*3	Mode Switch , Deceleration Gears & Tension Plate.	Fig. A3	•	1) Put Mode Sw on.
			•	2) Put Deceleration Gear (B) on
			•	3) Put Deceleration Gear (A) on and a washer.
			•	4) Put Tension Plate on and 2 washers.
4	Loading Motor unit & Mechanism Interface Flex.	Fig. A4	--	1) Put Loading Motor Unit on and tighten 2 screws.
			--	2) Put Mechanism Interface Flex on and tighten 4 screws. After that, solder at terminal of Mode Sw.
5	Capstan Holder & Capstan Motor	Fig. A5-1	--	1) Put Capstan Motor on and tighten 3 screws. Timing Belt should be between Pulley and boss.
		Fig. A5-2	--	2) Put Capstan Holder on and tighten 2 screws.
6	Drive Gear	Fig. A6	--	1) Put a washer to shaft and install Drive Gear. Timing Belt should be wound around Drive Gear. After that, confirm Timing Belt and Gear are rotated together.
7	Boat Radon	Fig. A7	•	1) Put hole of Boat radon to shaft of chassis.
8	Chassis Radon	Fig. A8	•	1) Put Chassis Radon and a washer on.
9	Cam Gear	Fig. A9	•	1) Put Cam Gear on. Phase Mark should be in the same line with chassis of shaft..
10	Interface Gears	Fig. A10-1	•	1) Put Interface Gear(C) & (D). Each phase mark should be in the same line.
		Fig. A10-2	•	2) Put Interface Gear(A) & (B) on.
11	Tension Lever & Eject Arm.	Fig. A11	--	1) Put boss of Tension Lever into slit of Cam Gear and Tension Plate, then tighten a screw.

				2) Put boss of Eject Arm into slit of Cam Gear. Put a washer on shaft of chassis.
12	Pinch Beetle & Release Beetle	Fig. A12	•	1) Put boss of Pinch Beetle into slit of Mode Sw.
				2) Put boss of Release Beetle into slit of Mode Sw.
				3) Put a washer on.
13	Gear Cover	Fig. A13	--	1) Keep sliding Gear Cover and put it on.
				2) Tighten a screw.
14	T-Loading Gear & S-Loading Gear	Fig. A14	•	1) Put S-Loading Gear on.
				2) Put T-Loading Gear on. Each phase mark should be in the same line.
15	Rail Unit	Fig. A15-1	--	1) Make half loading until Connection Arm comes out.
		Fig. A15-2	--	2) Connect Arm of S & T Loading Gear and Connection Arms. a) Hold Loading Gear side. b) Push Arm of S & Tloading Gear into slit of connection arms.
		Fig. A15-3	--	3) Tighten 4 screws.
16	Pinch Arm & Center Gear	Fig. A16-1	--	1) Put Center Gear Spacer on shaft of chassis.
				2) Put Center Gear on.
		Fig. A16-2	•	3) Make full loading position and put Pinch arm on, then put a washer on.
17	Sub Chassis Unit	Fig. A17-1	--	1) Make unloading position until moving Release Beetle Confirm spring is exist.
		Fig. A17-2		2) Put Sub Chassis Unit on as pre-installation.
		Fig. A17-3		3) Tighten 3 screws. Make Loading position until 1 screw position appears, then tighten a screw.
		Fig. A17-4		4) Tighten a screws at Flex Holder portion and Hook spring back to Pinch Arm.
18	LED Holder, Cover plate & Idler U.	Fig. A18-1	--	1) Put Idler U into shaft of Drive Gear.
		Fig. A18-2	--	2) Put Cover Plate on and tighten 5 screws, then hook 2 springs to 2hooking portion of Sub chassis. And also put LED Flat Cable back.
		Fig. A18-3		3) Put LED Holder back.
19	Confirmation of Mechanism movement , Cylinder Unit & RT Flex. Flame.	Fig. A19-1	--	1) Confirm loading and unloading is smooth.
		Fig. A19-2	--	2) Put Cylinder Unit & Spring on and tighten 3 screws.
		FIg. A19-3	--	3) Put RT Flex. Flame on and tighten 2 screws.
*20	H Amp Unit. (Only Q1 & Q2)	Fig. A20-1	--	1) Put H Amp Unit on and tighten a screw at bottom of chassis.
		Fig. A20-2		2) Connect Cylinder Flex to connector.

		Fig. A20-3		3) Put Shield case on and tighten a screw.
21	Cassette Up Unit.	Fig. A21-1	--	1) Put both S &T sides to coupling portion on.
		Fig. A21-2		2) Tighten 3 screws. (Q1 &2 have 4 screws)

The following parts should be applied Molyton Grease (VFK1024).



How to use washer jigs.

No.	Item	Fig.	Procedure

1	Washer Jigs	Fig. W1-1	1) Each Washers.
2		Fig. W1-2	1) Put a washer on tip of Jig.
3		Fig. W1-3	1) Put Jig on shaft.
4		Fig. W1-4	1) Put a washer on shaft by pressing Jig.

Fig. W1-1

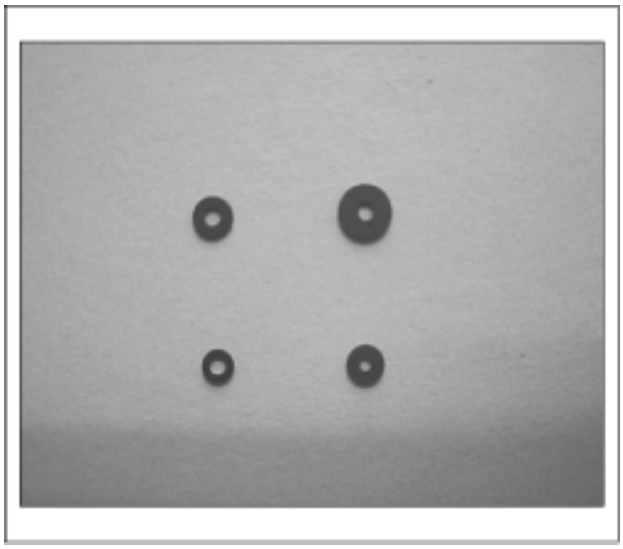


Fig. W1-2

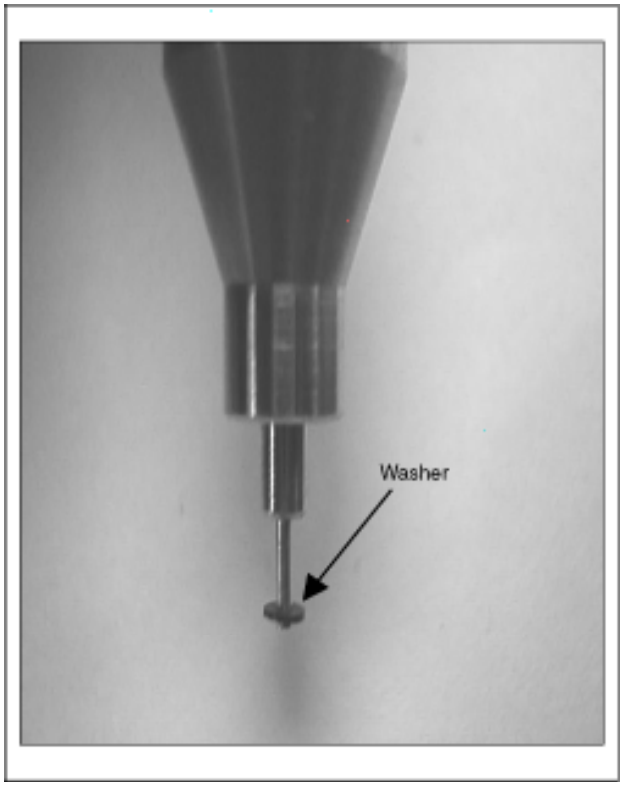


Fig. W1-3

Fig. W1-4

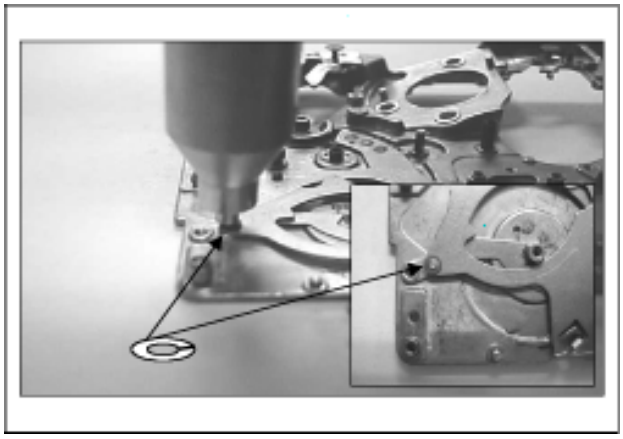


Fig. A1

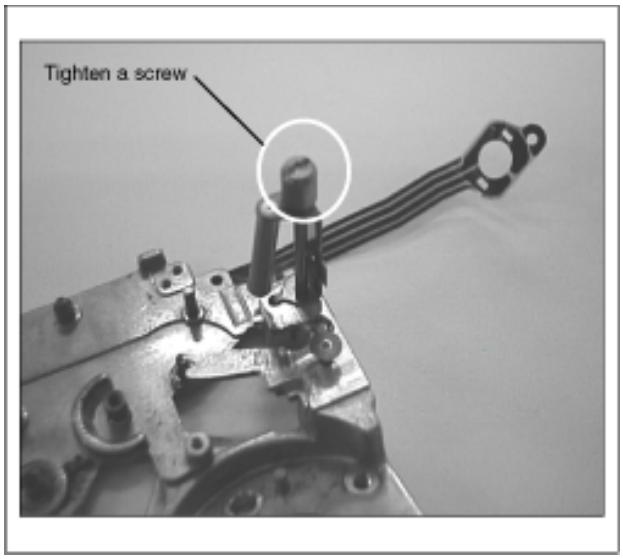


Fig. A2-1

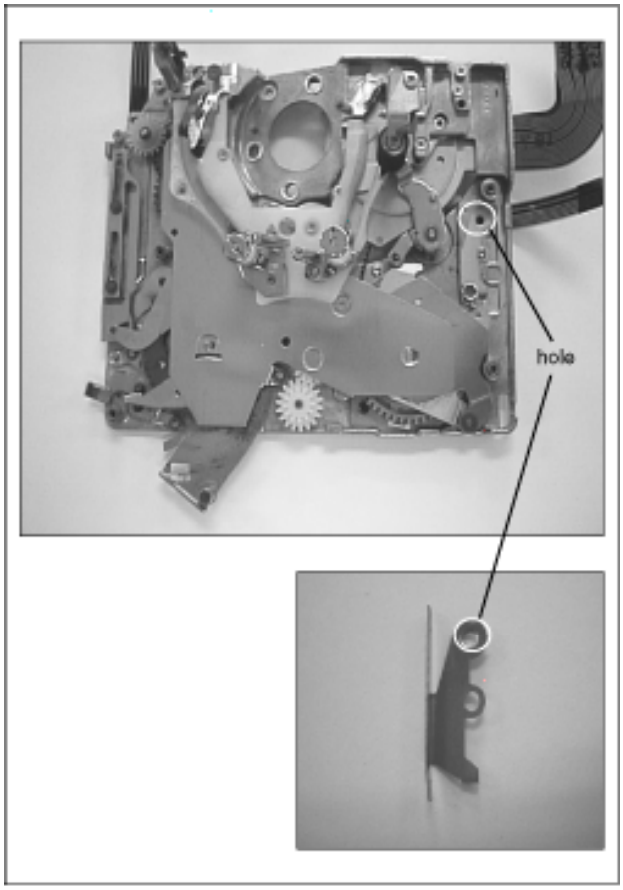


Fig. A2-2

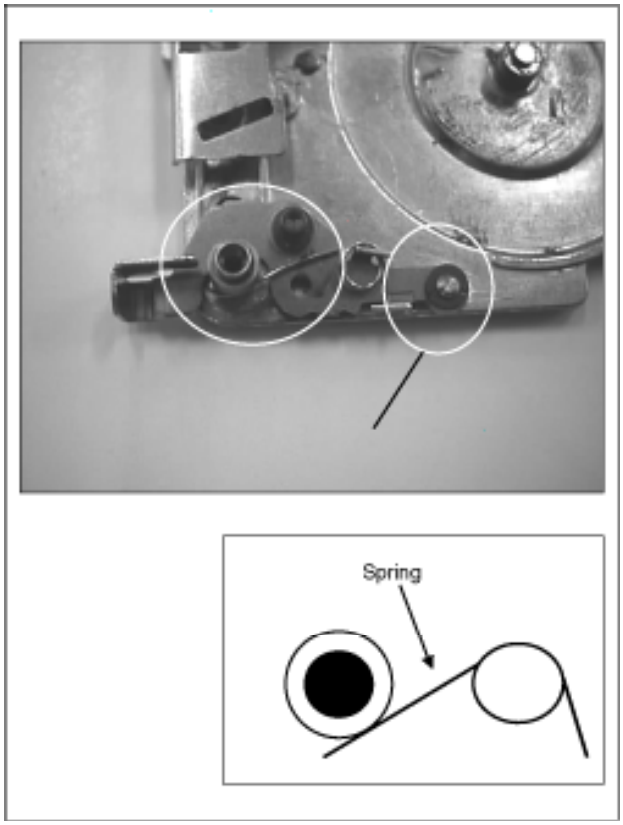


Fig. A2-3

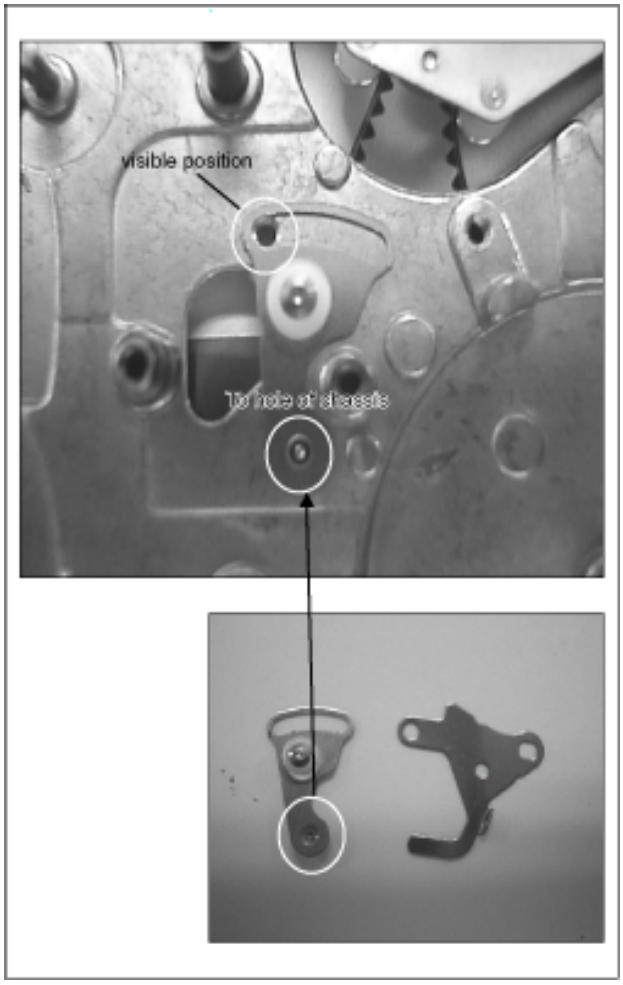


Fig. A2-4

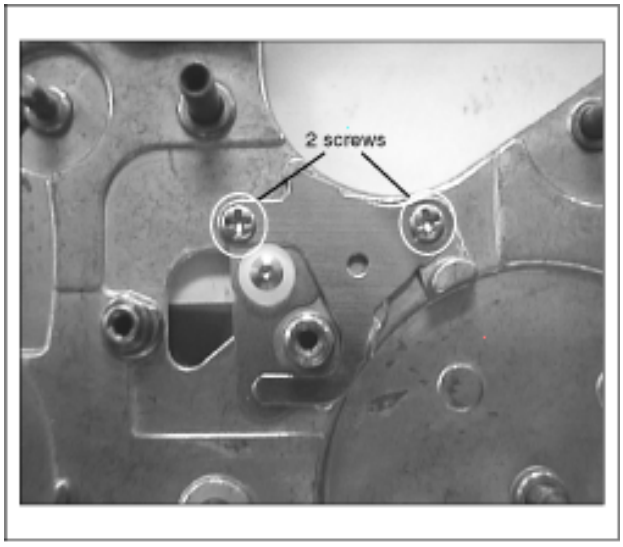


Fig. A3

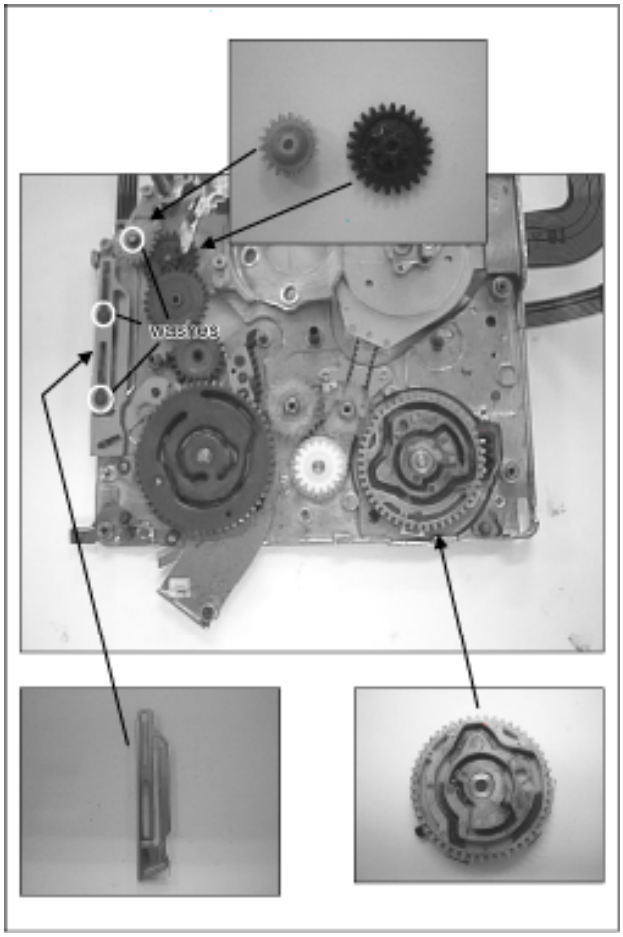


Fig. A4

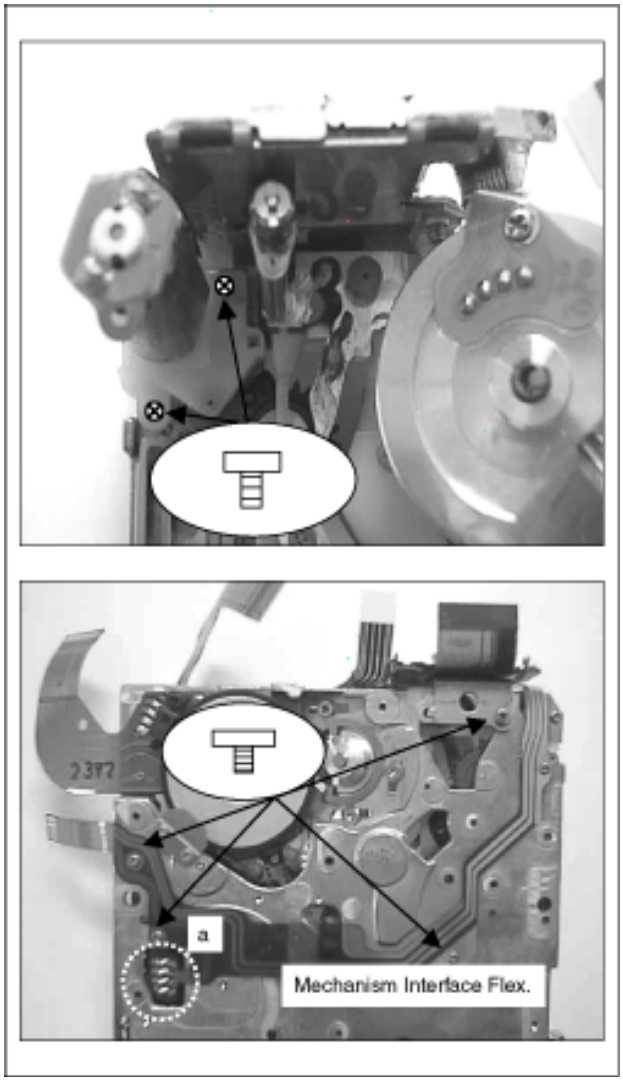


Fig. A5-1

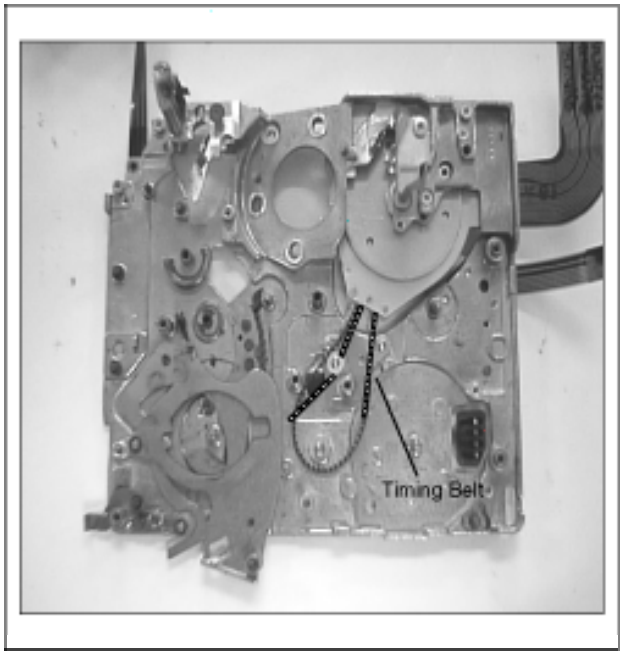


Fig. A5-2

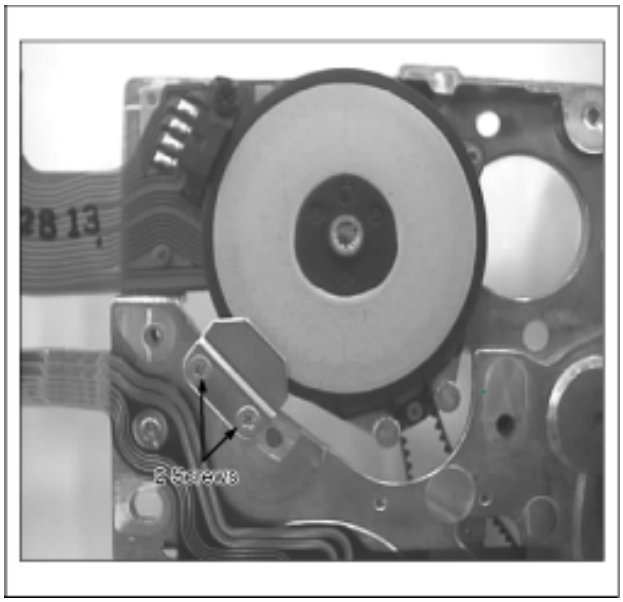


Fig. A6

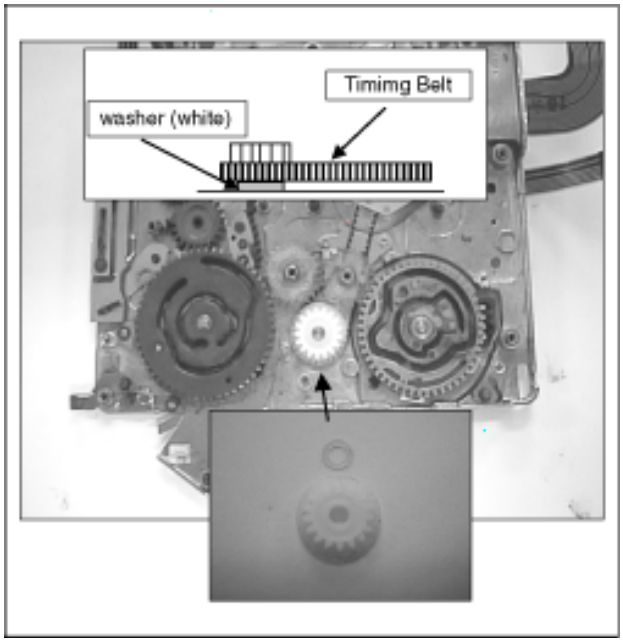


Fig. A7

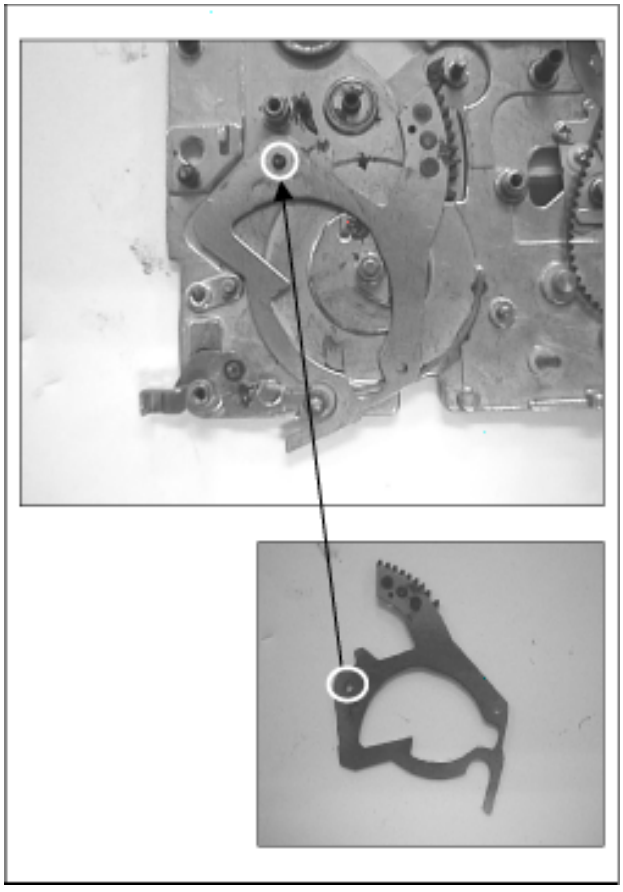


Fig. A8

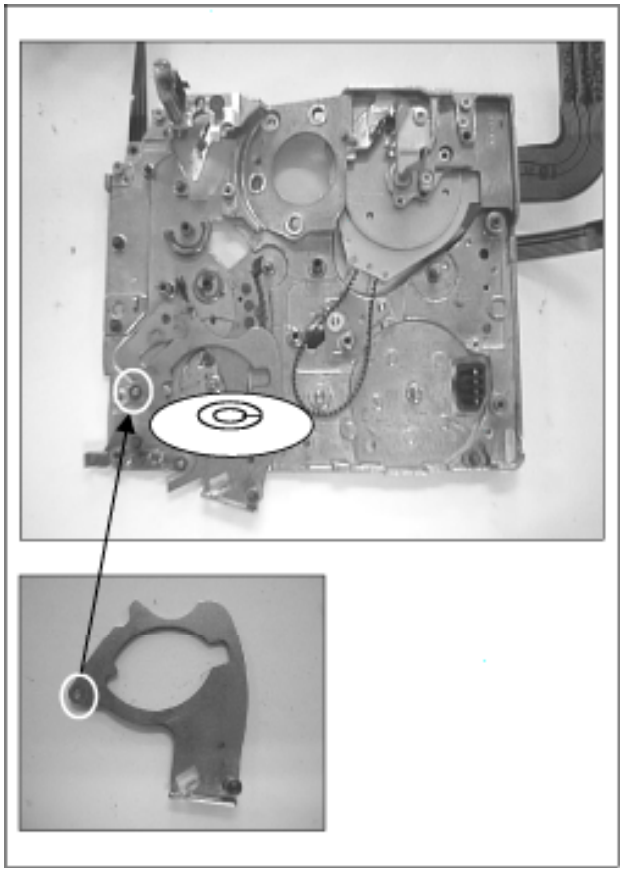


Fig. A9

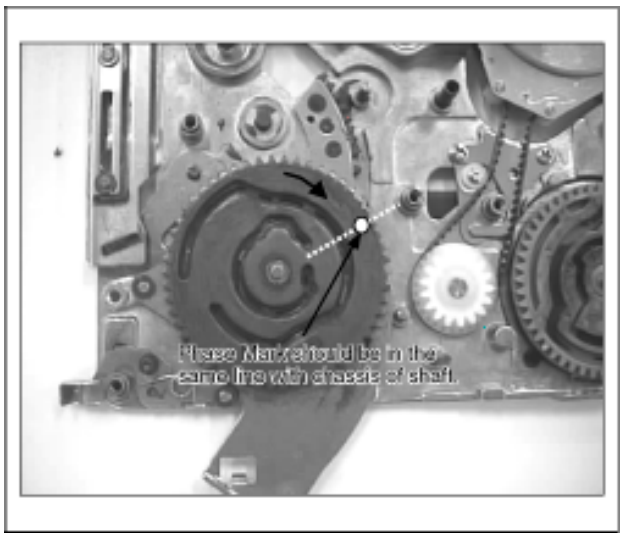


Fig. A10-1

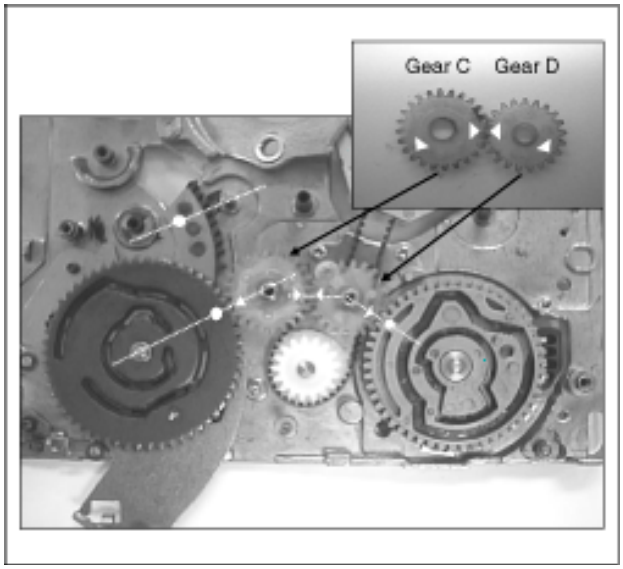


Fig. A10-2

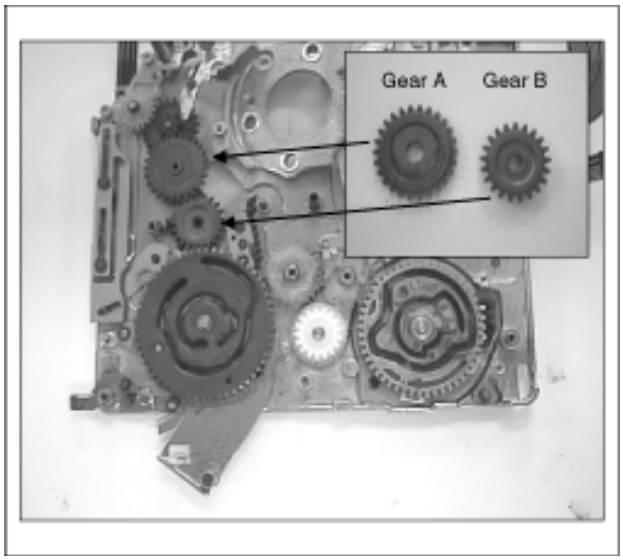


Fig. A11

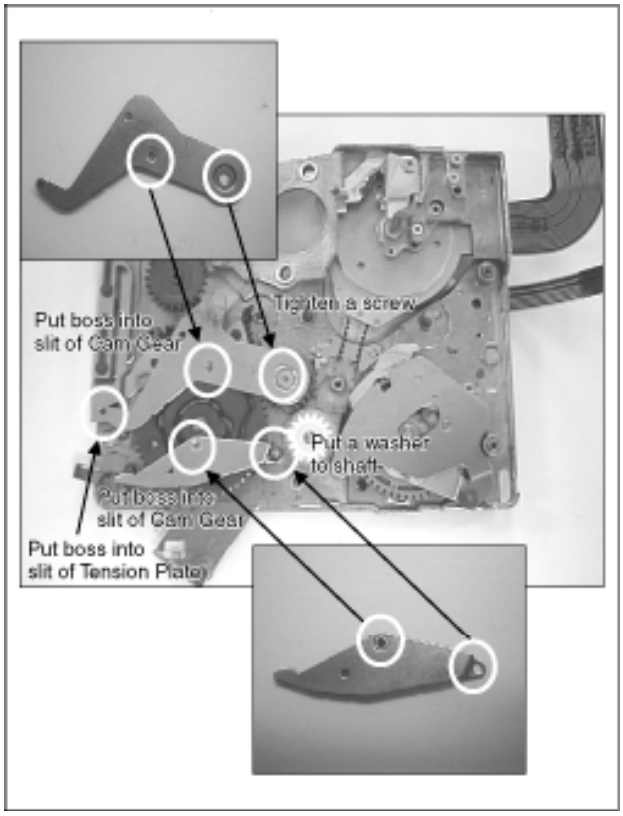

Put boss into slit of Cam Gear
Tighten a screw
Put a washer to shaft
Put boss into slit of Cam Gear
Put boss into slit of Tension Plate

Fig. A12

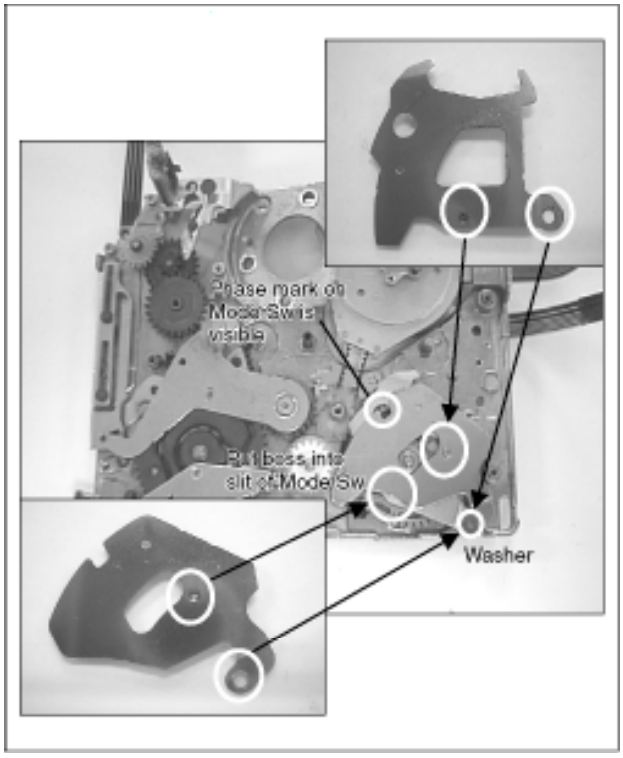


Fig. A13

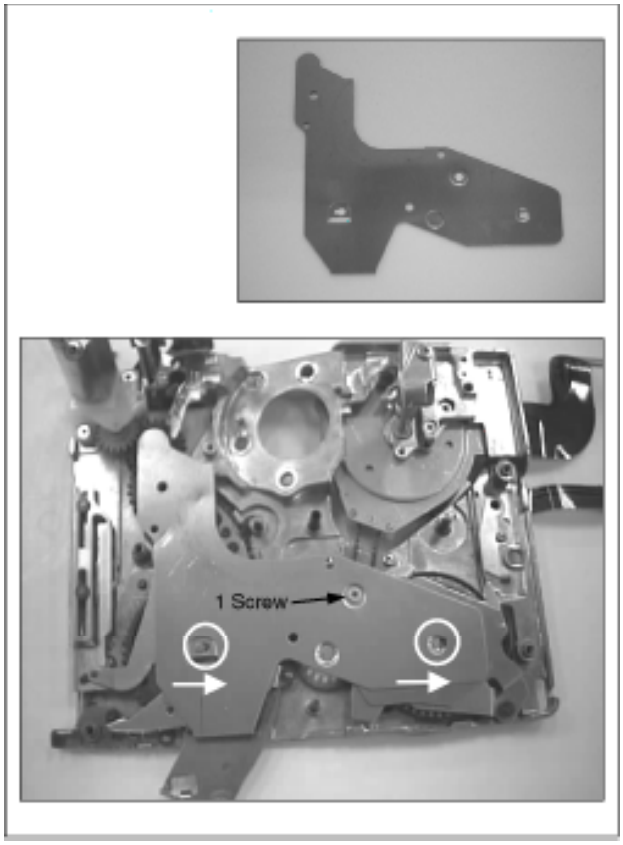


Fig. A14

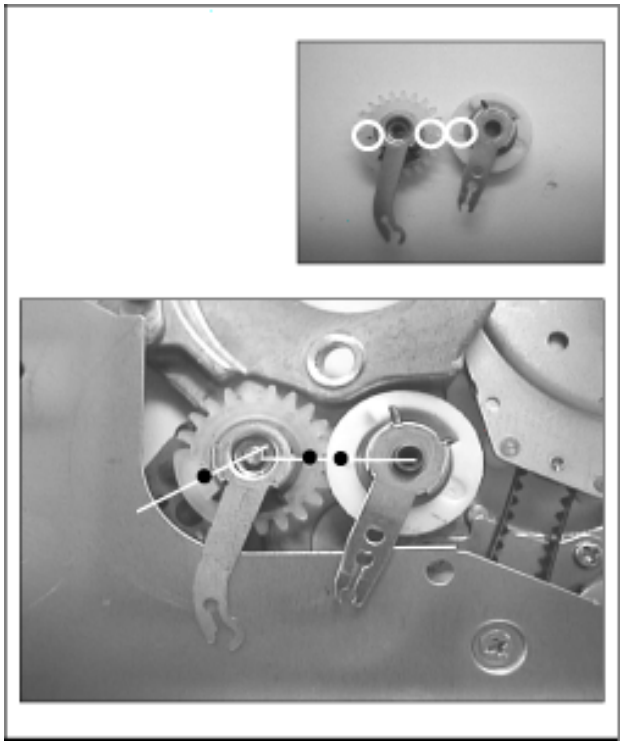


Fig. A15-1

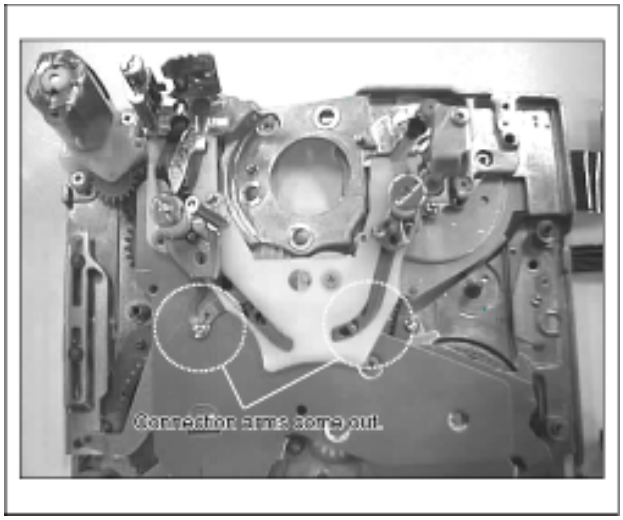


Fig. A15-2

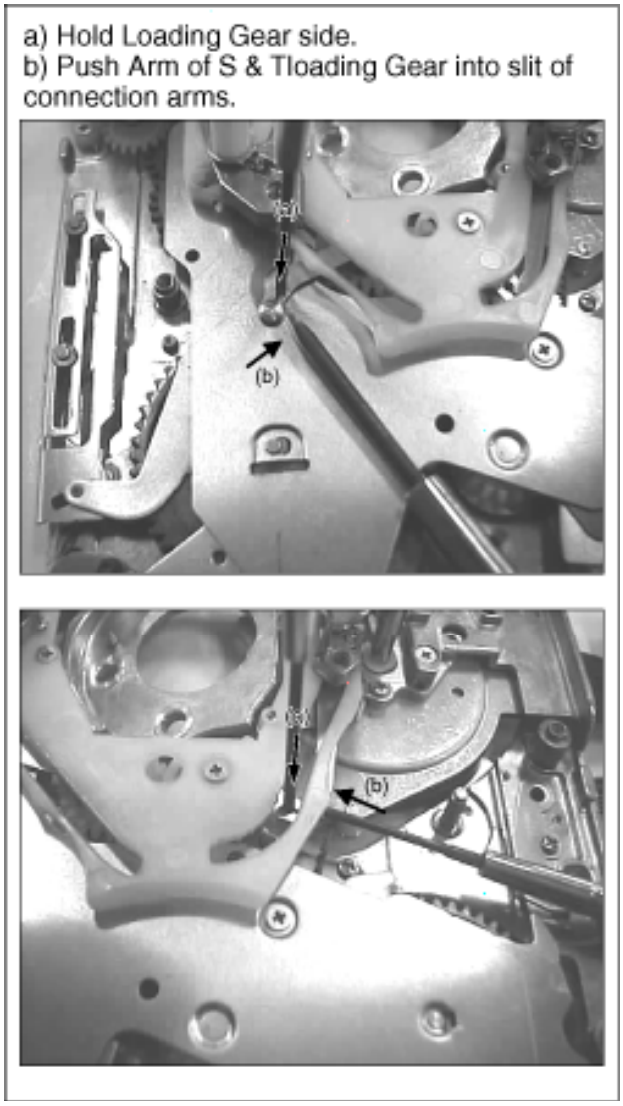

a) Hold Loading Gear side.
b) Push Arm of S & Tloading Gear into slit of connection arms.
(a)
(b)
(a)
(b)

Fig. A15-3

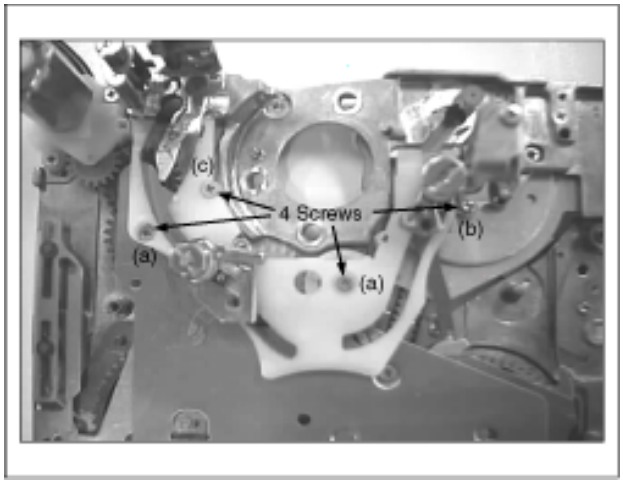

(c)
4 Screws
(b)
(a)
(a)

Fig. A16-1

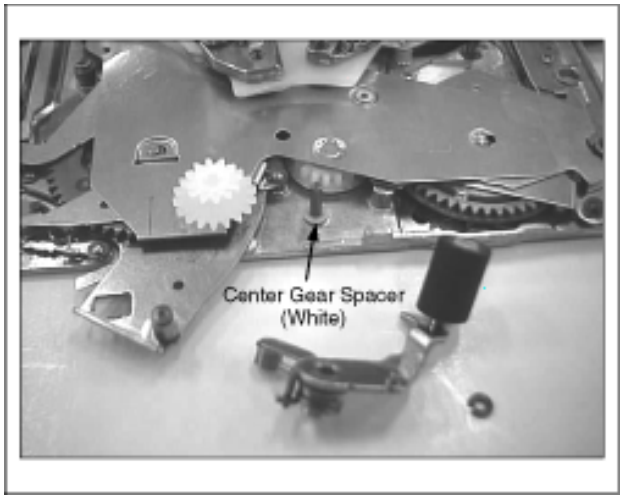


Fig. A16-2

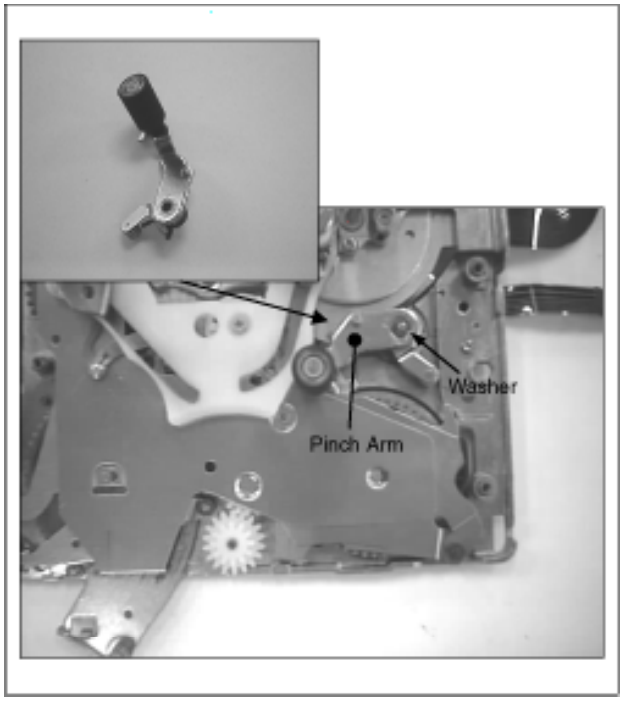


Fig. A17-1

Bottom Side of Take up

Fig. A17-2

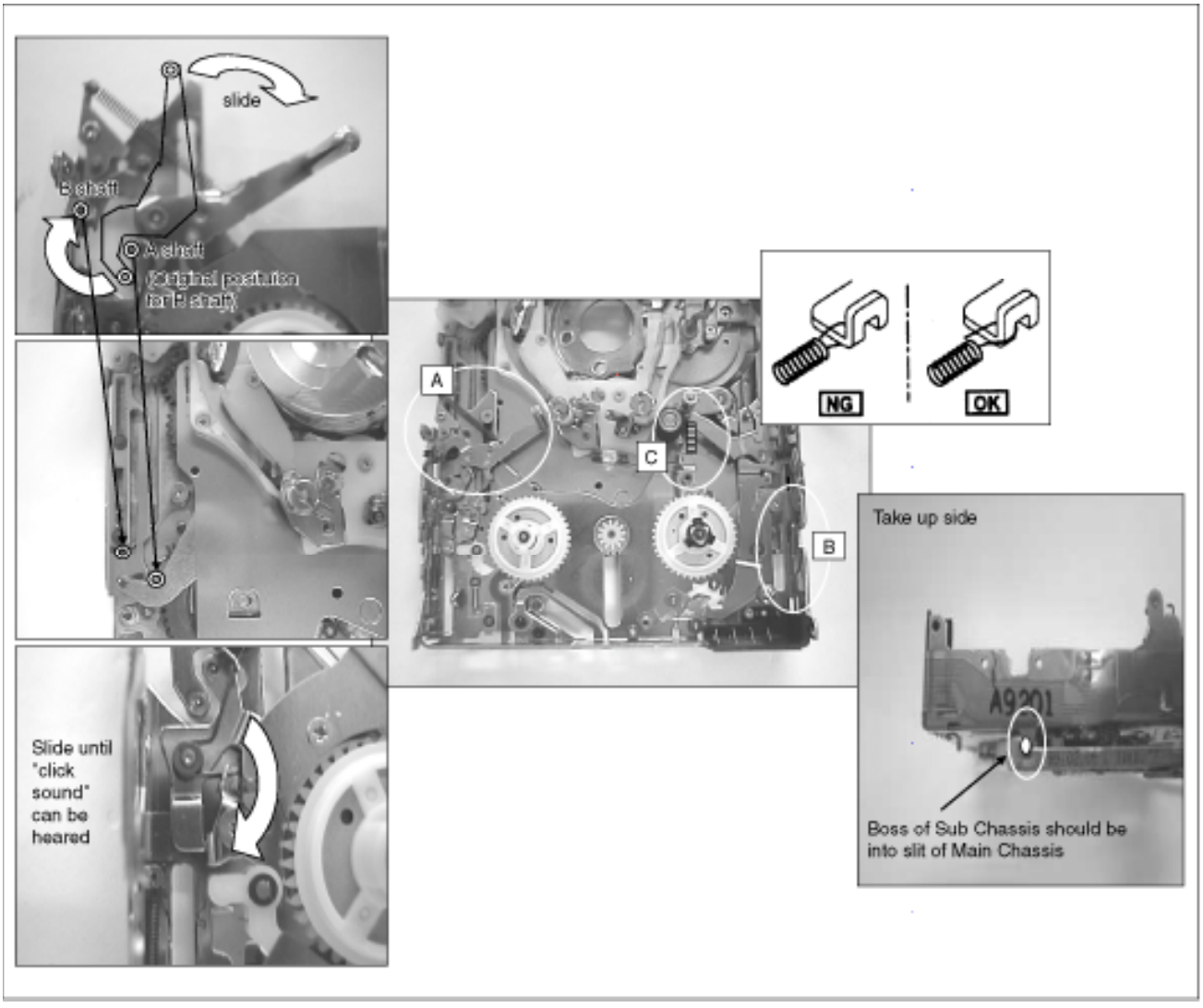

slide
B shaft
A shaft
(Original position for B shaft)
A
C
B
NG
OK
Take up side
A9201
Boss of Sub Chassis should be into slit of Main Chassis
Slide until "click sound" can be heared

Fig. A17-3

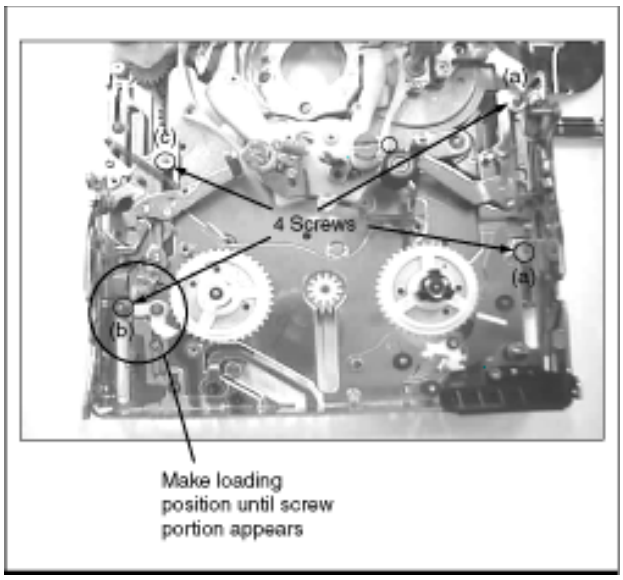


Fig. A17-4

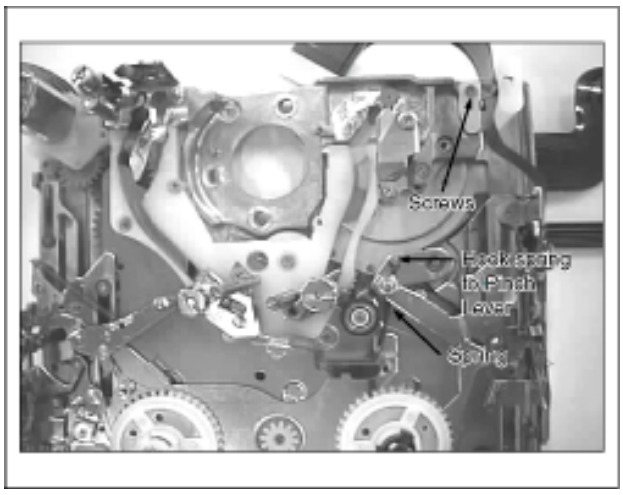


Fig. A18-1

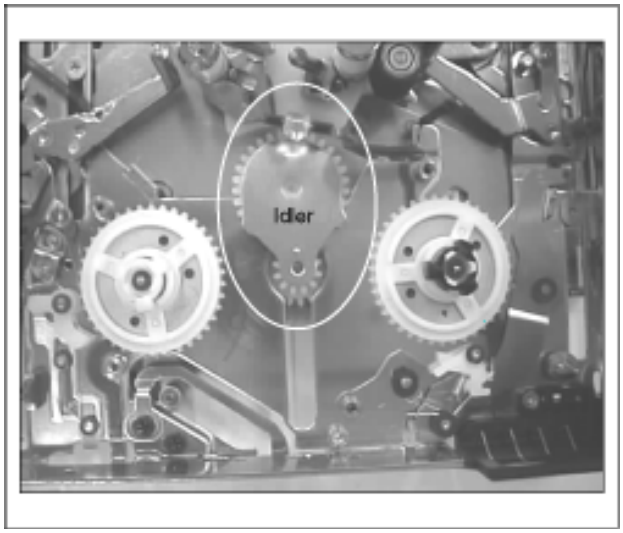


Fig. A18-2

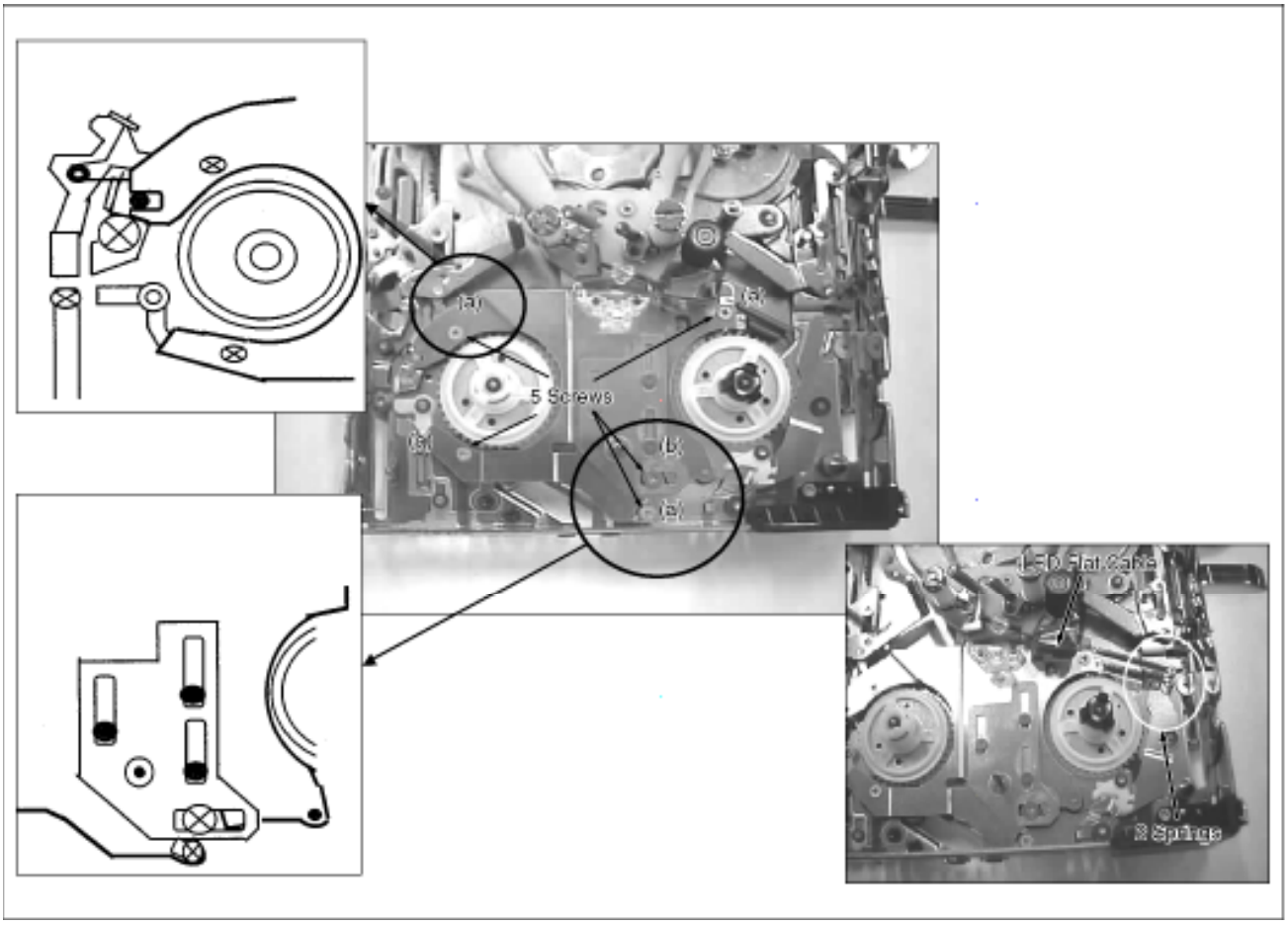


Fig. A18-3

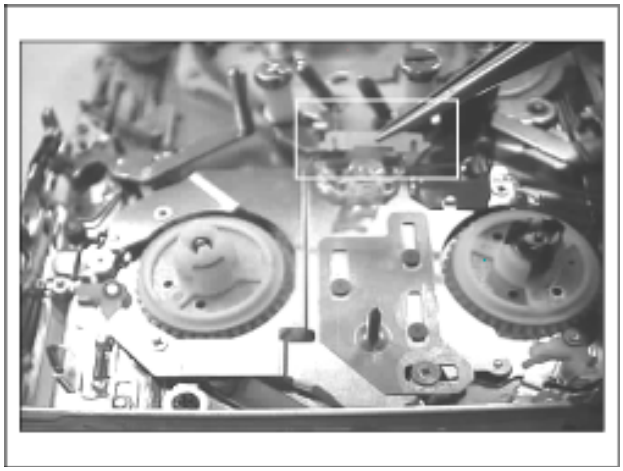


Fig. A19-1

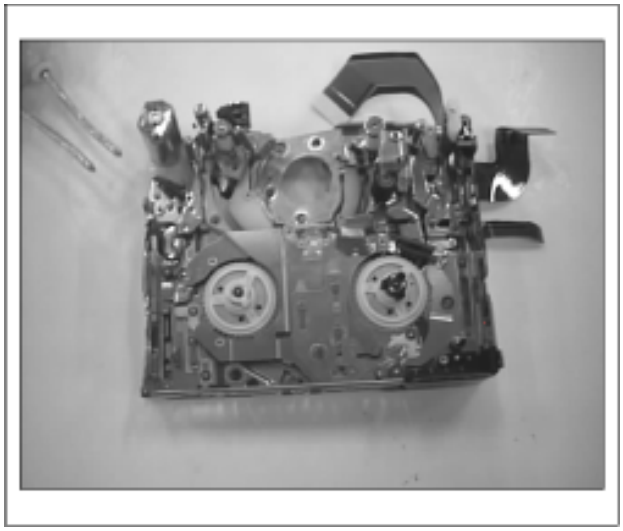


Fig. A19-2

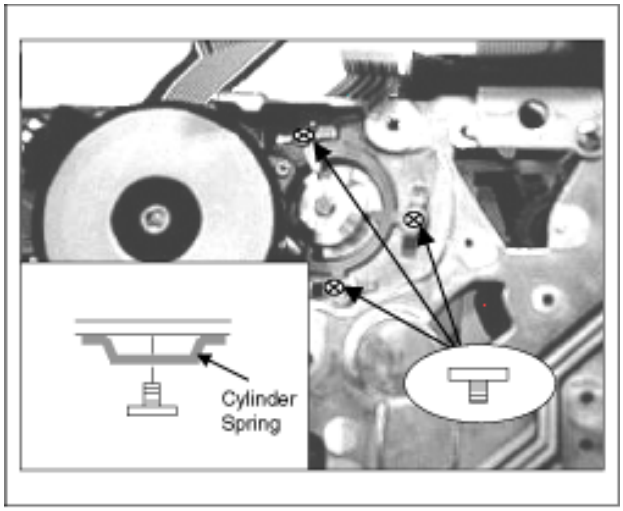


FIg. A19-3

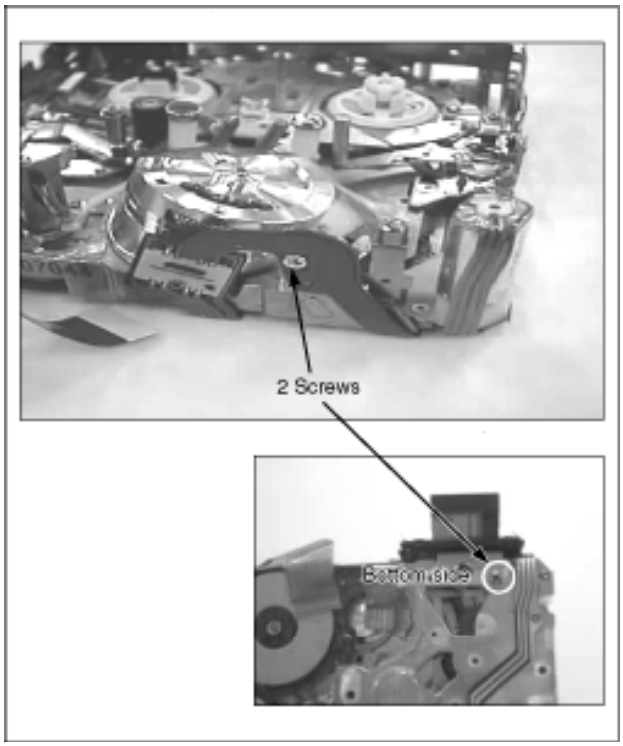


Fig. A20-1

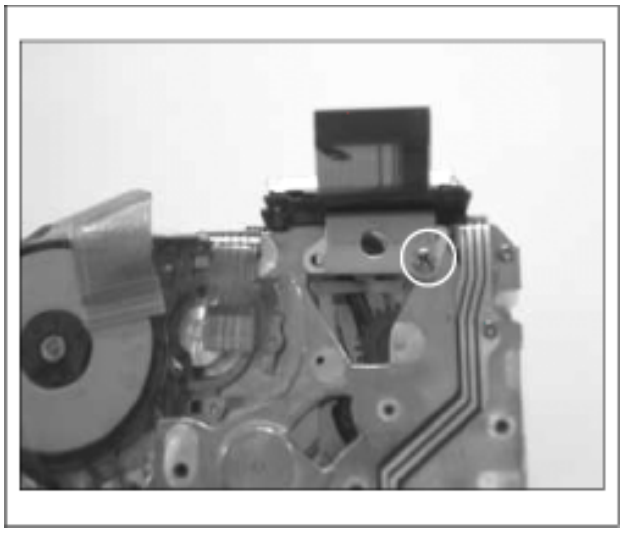


Fig. A20-2

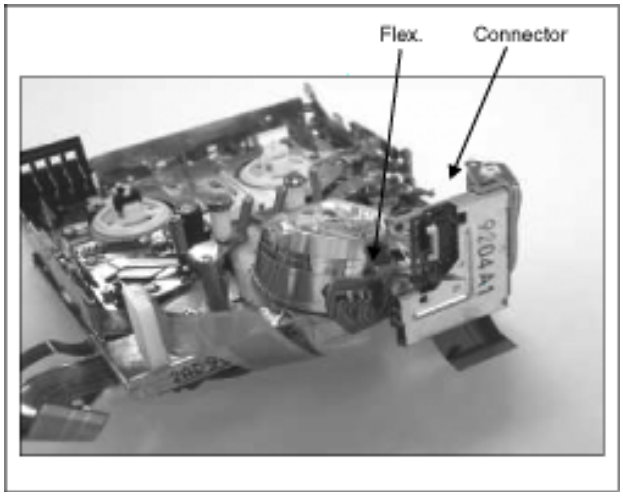


Fig. A20-3

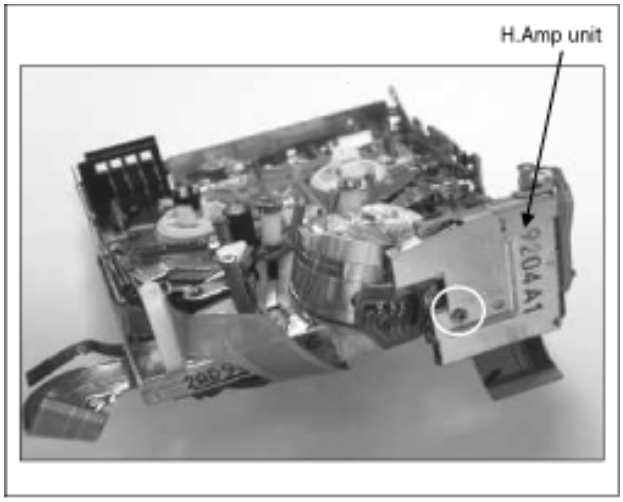


Fig. A21-1

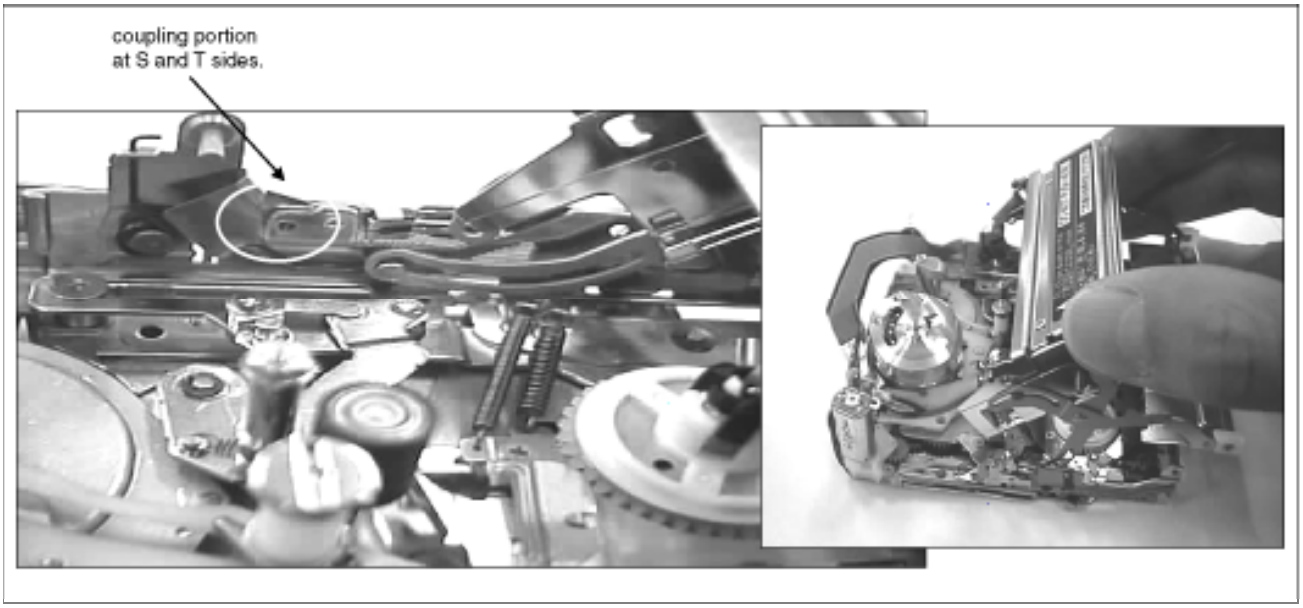


Fig. A21-2

TOP PREVIOUS NEXT

5.1 MECHANICAL ADJUST TABLE

TOP PREVIOUS NEXT

* 1) H.Amp Unit is applied only Q1 & Q2 mechanism.

No.	Item	Confirmation of Tape Running	Linearity Adjustment	Confirmation of B.E.R. Value	Capstan tilt Adjustment	S3 Base adjustment	Sub Chassis Adjustment
1	MECHANISM CHASSIS	--	--	•	--	--	--
2	Cassette Up Unit.	--	--	--	--	--	--
*3	H Amp Unit.	--	--	•	--	--	--
4	Cylinder Unit	•	•	•	--	--	--
5	RT Flex. Flame.	--	--	--	--	--	--
6	LED Holder	--	--	--	--	--	--
7	Cover Plate	--	--	--	--	--	--
8	Idler U.	--	--	•	--	--	--
9	Sub Chassis Unit	•	•	•	--	--	•
10	Pinch Arm	•	•	•	--	--	--
11	Center Gear	--	--	•	--	--	--
12	Rail Unit	•	•	•	--	--	--
13	S-Loading Gear	--	--	•	--	--	--
14	T-Loading Gear	--	--	•	--	--	--
15	Gear Cover	--	--	•	--	--	--
16	Pinch Beetle	--	--	•	--	--	--
17	Release Beetle	--	--	•	--	--	--
18	Tension Lever	•	•	•	--	--	--
19	Eject Arm	--	--	--	--	--	--
20	Interface Gears	--	--	•	--	--	--
21	Cam Gear	--	--	•	--	--	--
22	Chassis Radon	--	--	--	--	--	--
23	Boat Radon	--	--	--	--	--	--
24	Drive Gear	--	--	•	--	--	--
25	Capstan Holder	--	--	--	--	--	--
26	Capstan Motor	•	•	•	•	--	--
27	Loading Motor Unit	--	--	--	--	--	--

28	Mechanism Interface Flex.	--	--	--	--	--	--
29	Mode Switch	--	--	--	--	--	--
30	Deceleration Gears	--	--	•	--	--	--
31	Tension Plate	•	•	•	--	--	--
32	T4 Guide	--	--	--	--	--	--
33	Eject Lever	--	--	--	--	--	--
34	Pulley Cover	--	--	--	--	--	--
35	Pulley	--	--	--	--	--	--
36	S3 Base U.	•	•	•	--	•	--

TOP PREVIOUS NEXT

5.2 MECHANICAL ADJUSTMENT PROCEDURE

TOP PREVIOUS NEXT

No.	Item	Equipment	Fig.	Procedure
1	Confirmation of Tape Running	1. Alignment Tape (PAL: VFM3110EDS/NTSC: VFM3010EDS) 2. Post Adjustment Driver(VFK1278)	Fig. AD1-1	1) Confirm each post position in playback mode.
			Fig. AD1-2	2) Confirm condition of tape regulation in playback & review mode.
2	Linearity Adjustment	1.Tatsujin system(Refer to Fig.)	Fig. AD2-1	1) Set up Tatsujin System.
		2. Alignment Tape (PAL: VFM3110EDS/NTSC: VFM3010EDS) 3. Envelope Detecor Board (VFK1641) 4. Post Adjustment Driver (VFK1278)	Fig. AD2-2	2) Connect Envelope Detector Board between Measuring Board & Oscilloscope.
			--	3) Remove Adjustment Cover. * Location for Adjustment Cover depends on Models.
			Fig. AD2-3	4) Playback the Alignment Tape and adjust S2 & T3 posts by Screw Driver until wavefom becomes flat. After adjustment, B.E.R. should be confirmed by Electrial adjustment on the "Tatsujin".
3	Confirmation of B.E.R. Value	1.Tatsujin system(Refer to Fig.)	Fig. AD2-1	1) Refer to Electrical Adjustment on the "Tatsujin".
4	Capstan tilt Adjustment	1. Capstan Tilt Adj. Jig(VFK1638) 2. Small Phillips Screw Driver	Fig. AD4-1	1) Slide sensor pin to Capstan shaft. After touching,if OK, LED should be lit. * Do not touch when you confirm LED lit or not.
			Fig. AD4-2	2) If Ng, Capstan tilt should be adjusted. a) Tighten screw (A) until LED is lit. b) Loose screw (B) until LED is not lit. c)Tightenscrew (A) unti-clockwise until LED is lit .
5	S3 Base adjustment	1. Post Adjustment Driver(VFK1278)	Fig. AD5-1	1) Adjust S3 screw as Evvelope becomes flat.
			Fig. AD5-2	2) Tighten a screw 180 degree as "ENV 1". 3) Loosen a screw as ENV 2. 4) Tighten a screw until ENV becomes flat as ENV 3 and tighten a screw 180 degree again.
6	Sub Chassis Adjustment	1. Small Phillips Screw Driver	Fig. AD6-1	1) Make Review Position. * Set Loading mode and then,stop Pinch Roller & Capstan shaft is touched.

			Fig. AD6-2	2) Loosen a screw. After fixing a shaky Sub Chassis,then tighten a screw.

Fig. AD1-1

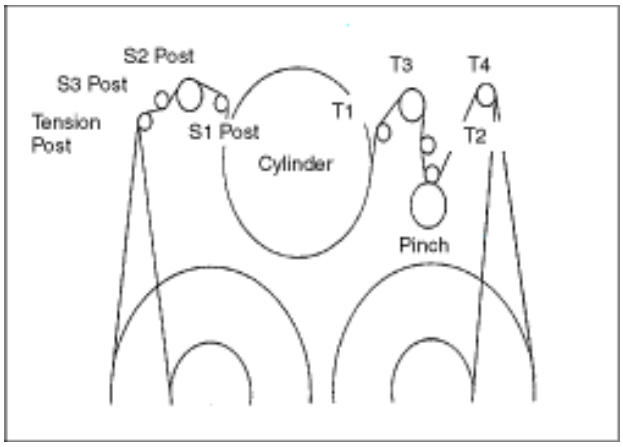


Fig. AD1-2

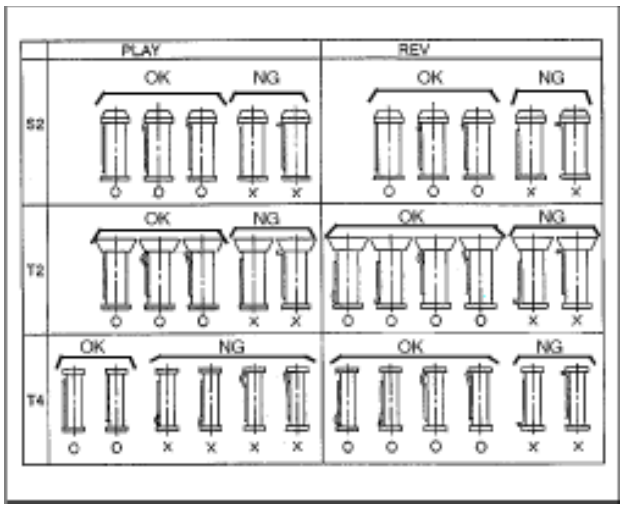


Fig. AD2-1

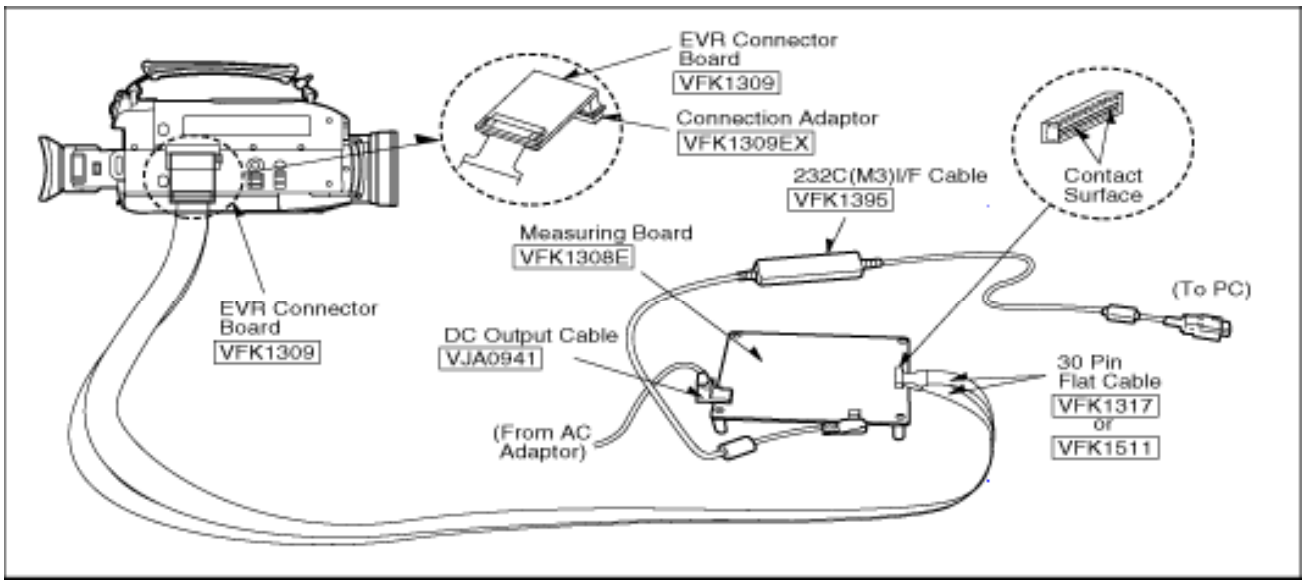


Fig. AD2-2

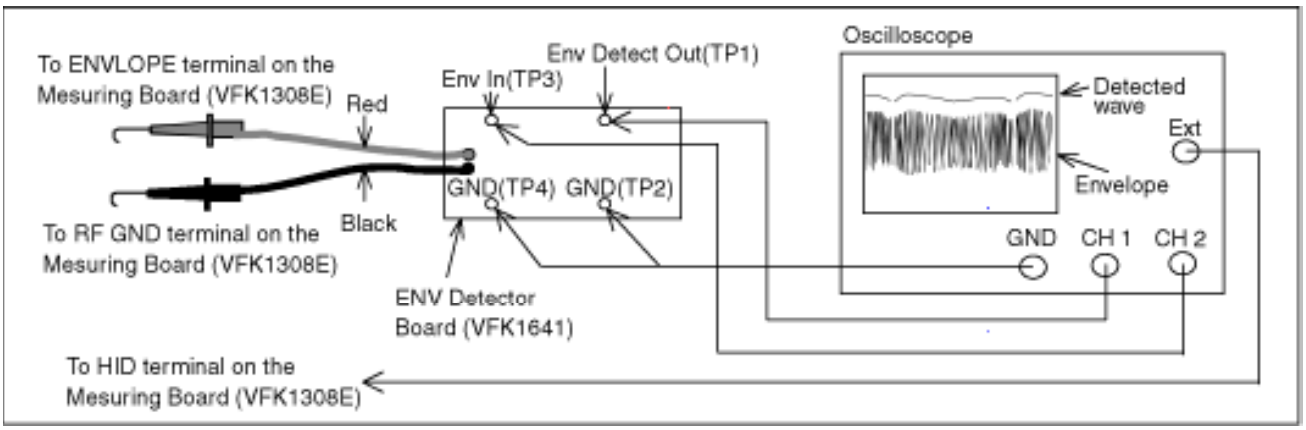


Fig. AD2-3

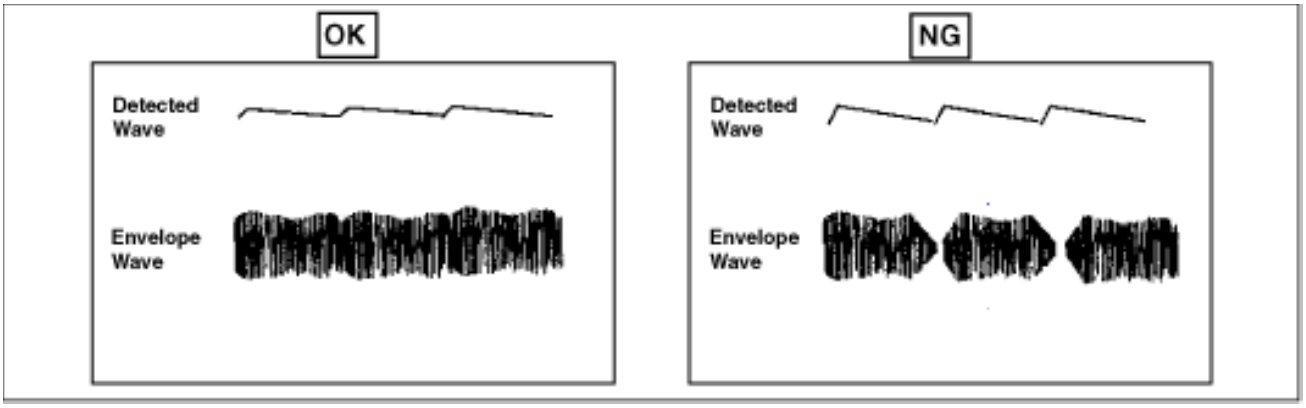


Fig. AD4-1

Fig. AD4-2

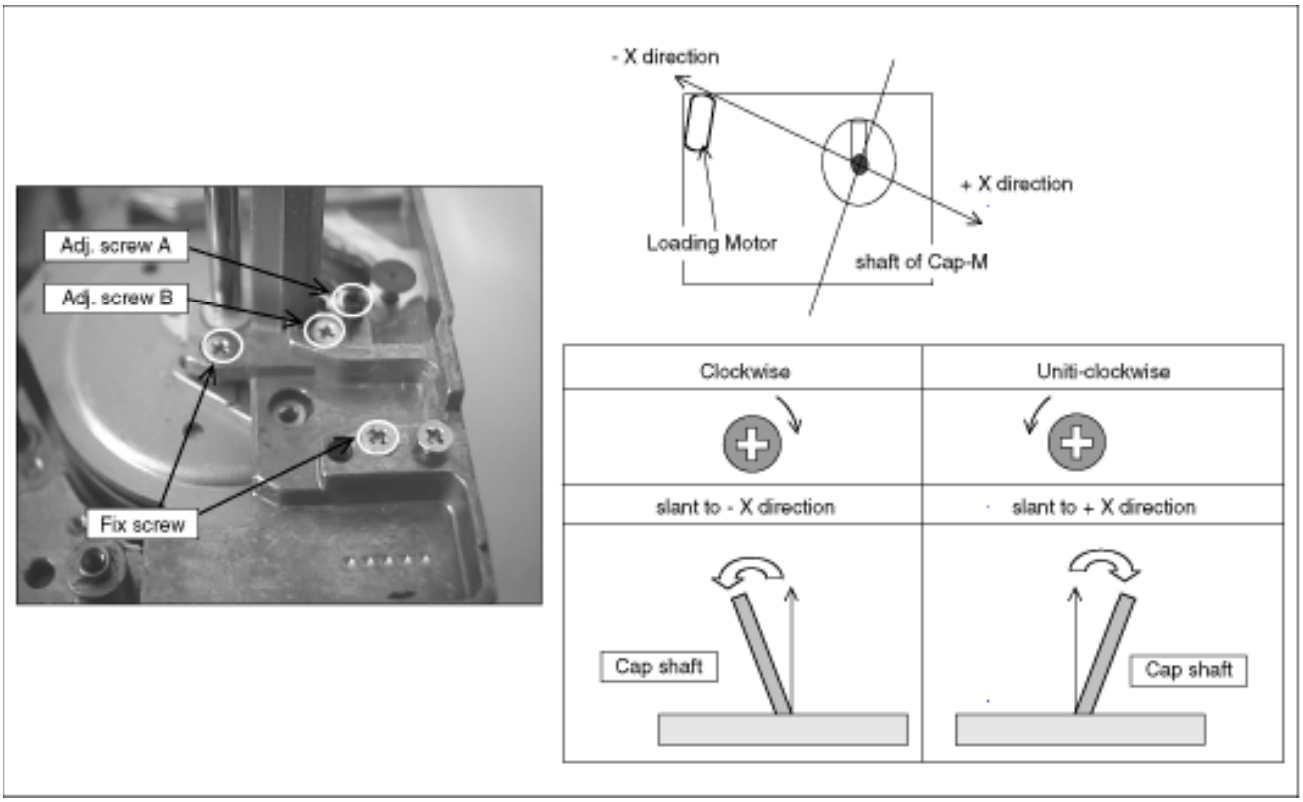


Fig. AD5-1

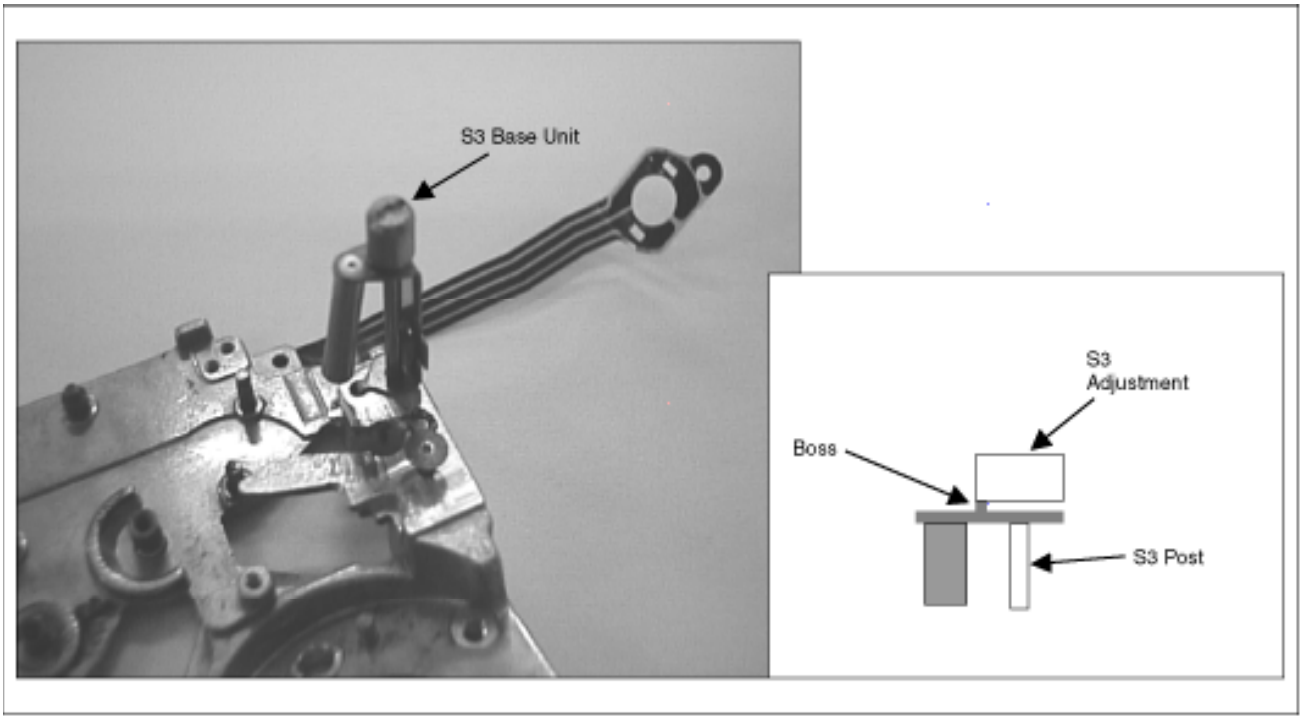


Fig. AD5-2

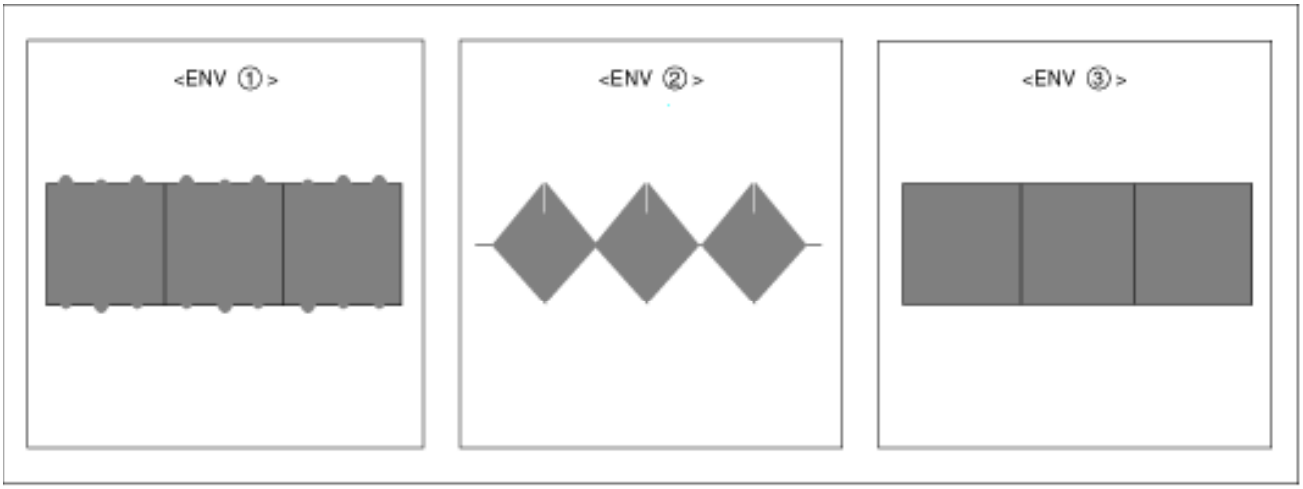


Fig. AD6-1

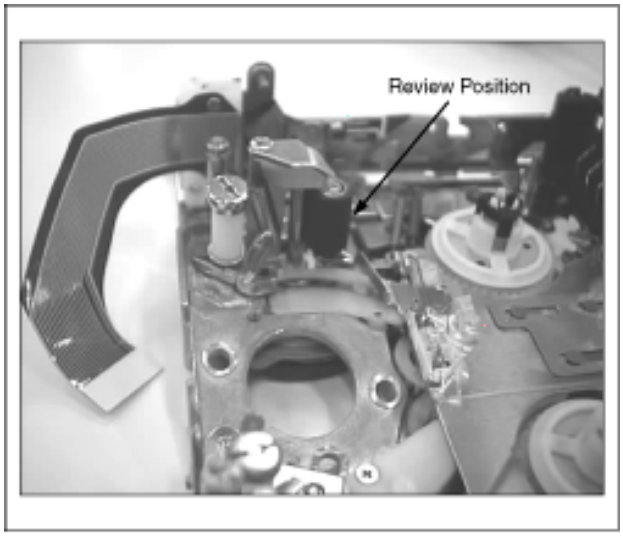
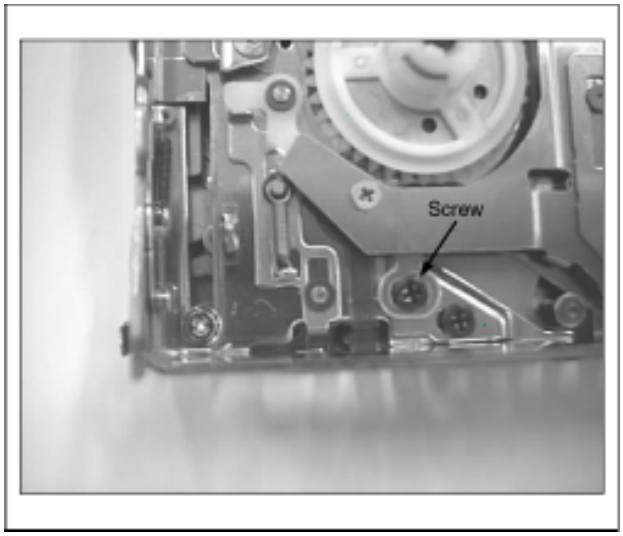


Fig. AD6-2

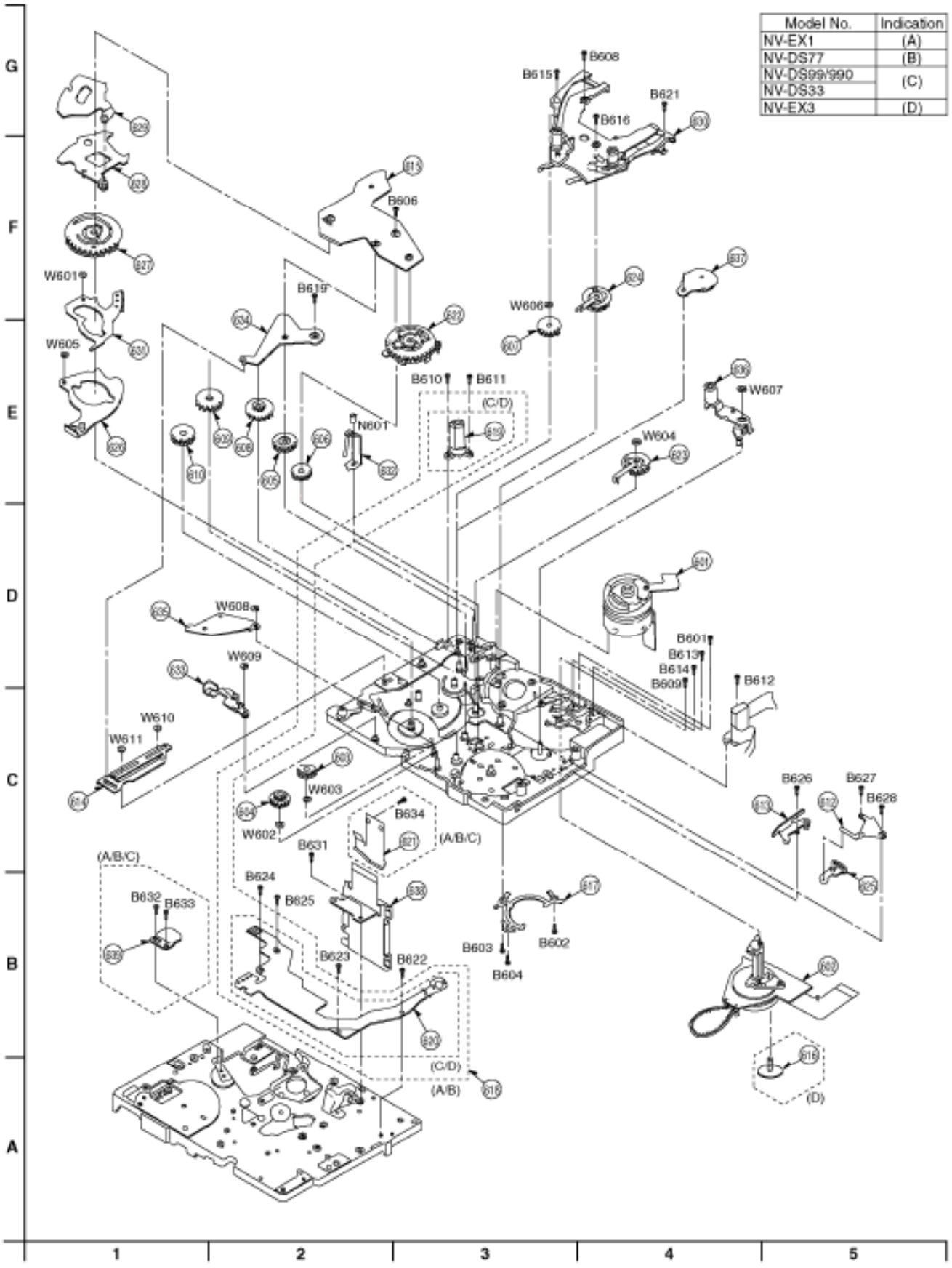


TOP PREVIOUS NEXT

6.1 Q1& Q2 VCR MECHANISM SECTON (1)

TOP PREVIOUS NEXT

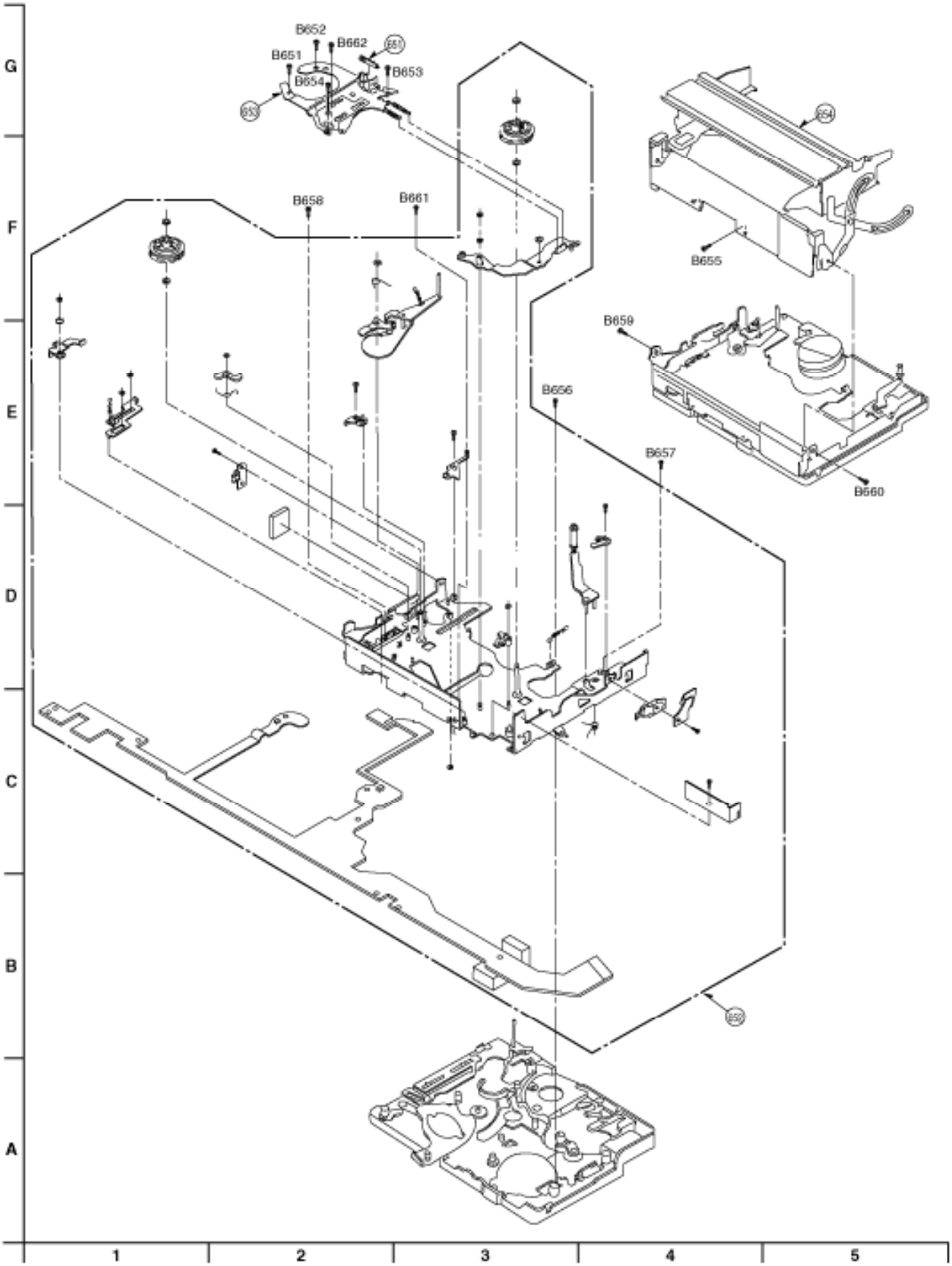
TOP PREVIOUS NEXT


Model No. | Indication
NV-EX1 | (A)
NV-DS77 | (B)
NV-DS99/990 | (C)
NV-DS33 | (C)
NV-EX3 | (D)
G
F
E
D
C
B
A
1
2
3
4
5
B608
B615
B621
B616
B606
B619
W601
W605
W606
B610
B611
(C/D)
W607
W604
N601
W608
W609
W610
W611
W603
W602
B601
B613
B614
B609
B612
B626
B627
B628
B634
(A/B/C)
B631
B624
B625
B632
B633
B623
B622
B603
B602
B604
(C/D)
(A/B)
(D)

6.2 Q1& Q2 VCR MECHANISM SECTION (2)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

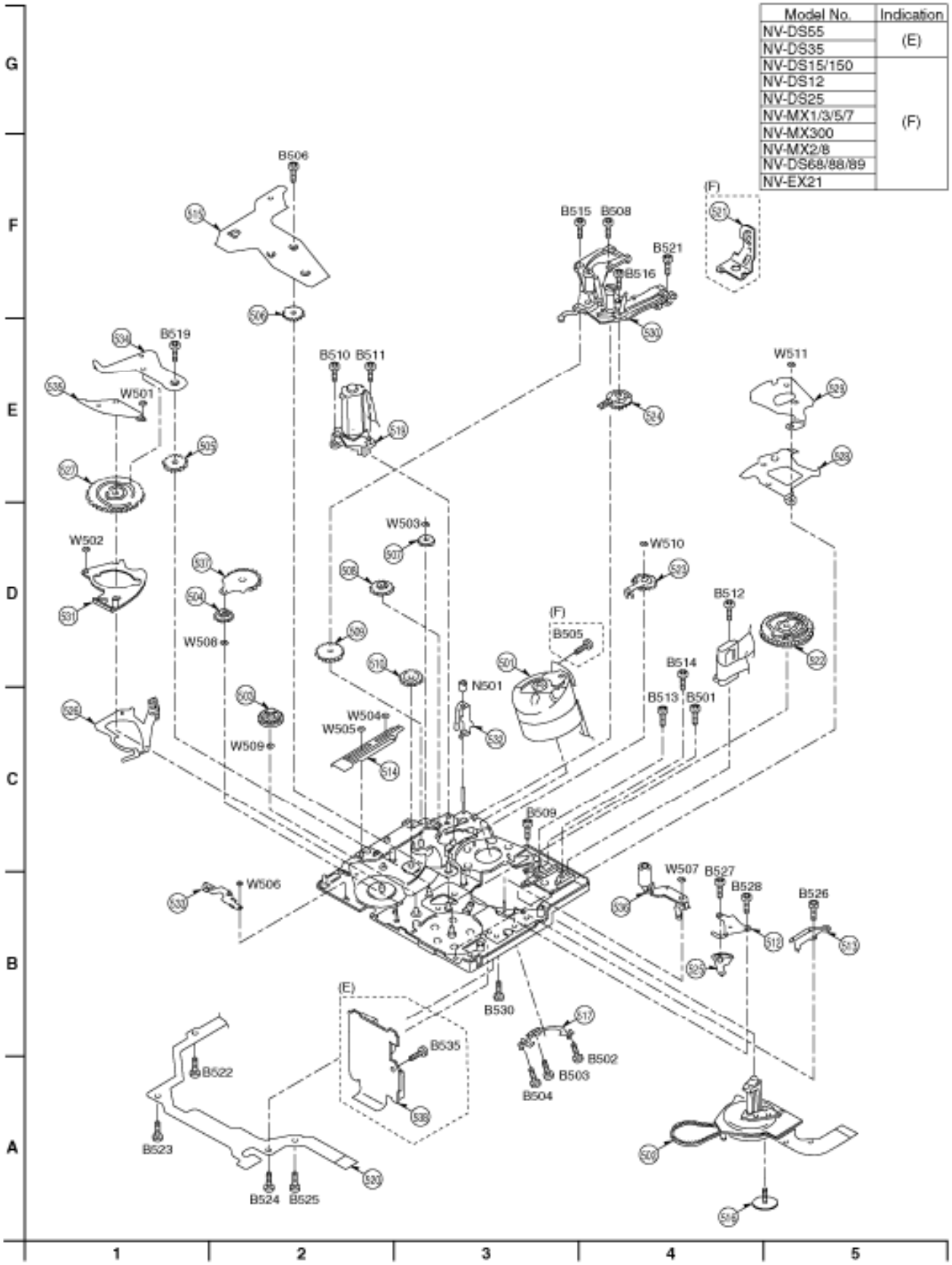

B652
B662
B651
B653
B654
B658
B661
B655
B650
B656
B657
B660
G
F
E
D
C
B
A
1
2
3
4
5

6.3 Q3 VCR MECHANISM SECTION (1)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

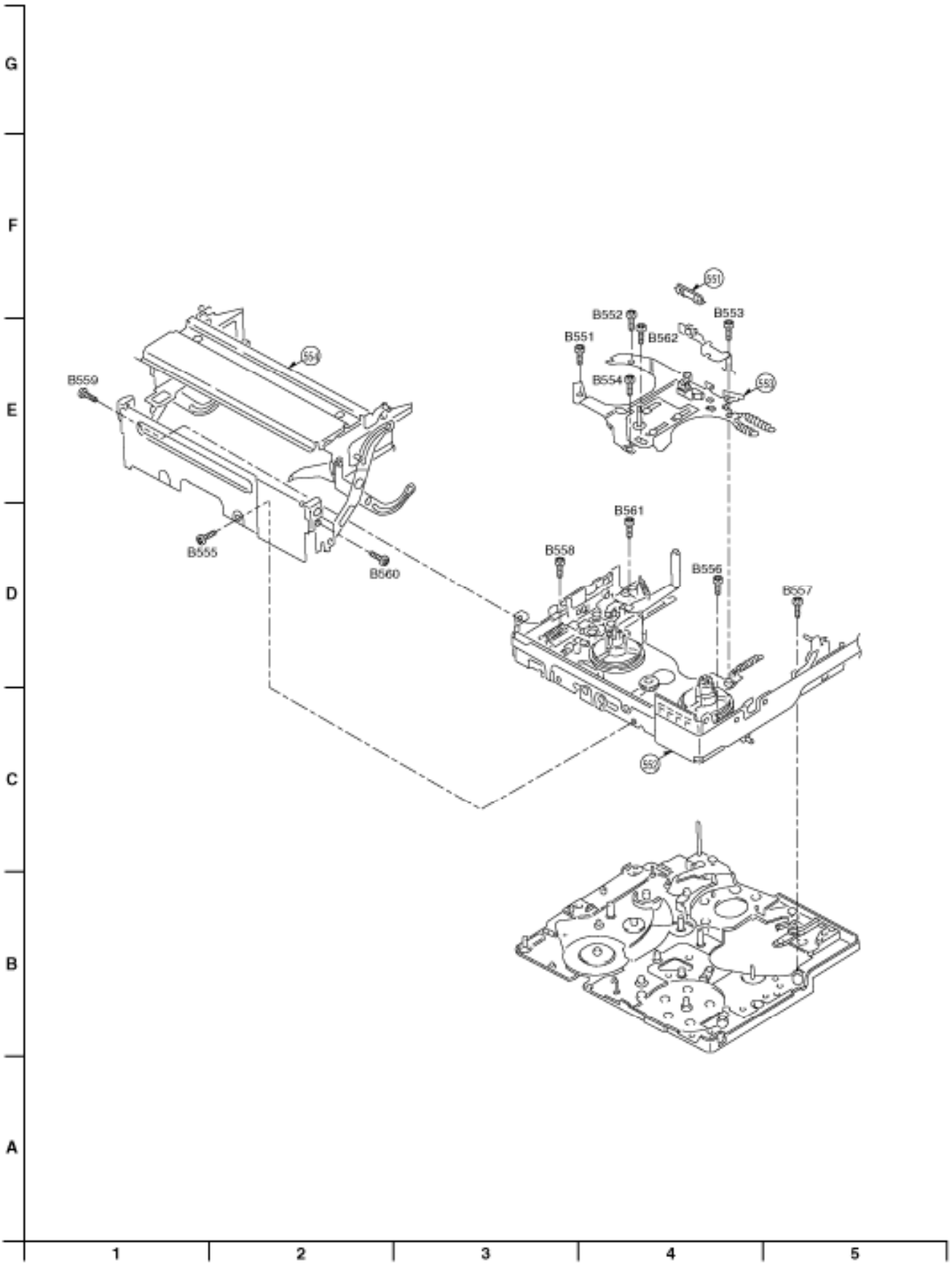
Model No.	Indication
NV-DS55	(E)
NV-DS35	
NV-DS15/150	(F)
NV-DS12	
NV-DS25	
NV-MX1/3/5/7	
NV-MX300	
NV-MX2/8	
NV-DS68/88/89	
NV-EX21	



6.4 Q3 VCR MECHANISM SECTION (2)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT


G
F
E
D
C
B
A
1
2
3
4
5
B551
B552
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557

7.1 Q1& Q2 VCR MECHANISM SECTION
(1) PARTS LIST

TOP PREVIOUS NEXT

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark: △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
601	VEG1495	CYLINDER U.	
602	DFX25A7VWB	CAPSTAN U.	
603	VDG1284	DRIVE GEAR	
604	VDG1285	CENTER GEAR	
605	VDG1290	INTERFACE GEAR (C)	
606	VDG1291	INTERFACE GEAR (D)	
607	VDG1295	DECELERATION (A)	NV-EX1,NV-DS77
607	VDG1330	DECELERATION (A)	NV-DS99/990,NV-DS33,NV-EX3
608	VDG1296	DECELERATION (B)	NV-EX1,NV-DS77
608	VDG1331	DECELERATION (B)	NV-DS99/990,NV-DS33,NV-EX3
609	VDG1297	INTERFACE GEAR (A)	
610	VDG1303-A	INTERFACE GEAR (B)	
612	VMA9908	PULLEY COVER	
613	VMA9916	T4 GUIDE	
614	VMA9917	TENSION PLATE	
615	VMA0E52	GEAR COVER	
616	VHD1430	CAPSTAN HOLDER	NV-EX3
617	VMC1443	CYLINDER SPRING	
618	L6DA8DKC0001	LOADING MOTOR U.	NV-EX1,NV-DS77
619	VEM0679	LOADING MOTOR U.	NV-DS99/990,NV-DS33,NV-EX3
620	VWJ1297	MECHANISM INTERFACE FLEX.	NV-DS99/990,NV-DS33,NV-EX3
622	K0ZZ00000453	MODE SWITCH	
623	VXA6124	S LOAD GEAR U.	
624	VXA6125	T LOAD GEAR U.	

625	VXA6133	PULLEY COVER	
626	VXA6134	CHASSIS RADON U.	
627	VXA6135	CAM GEAR U.	
628	VXA6136	PINCH BEETLE	
629	VXA6137	RELEASE BEETLE	
630	VXA6138	RAIL U.	
631	VXA6169	BOAT RADON U.	
632	VXA6184	S3 BASE U.	
633	VXL2814	EJECT LEVER U.	
634	VXL2815	TENSION LEVER U.	
635	VXL2816	EJECT ARM U.	
636	VXL2897	PINCH ARM U.	
637	VXL2818	IDLER U.	
638	VYK8485	HEAD AMP U.	NV-EX1
638	VYK8244	HEAD AMP U.	NV-DS77
638	VYK8886	HEAD AMP U.	NV-DS99/990,NV-DS33
638	VYK9102	HEAD AMP U.	NV-EX3
621	VSC4802	SHIELD CASE	NV-EX1
621	VSC4758	SHIELD CASE	NV-DS77,NV-DS99/990,NV-DS33
639	VMA9926	CAPSTAN HOLDER	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
B601	VHD1155	SCREW	
B602	VHD1372	SCREW	
B603	VHD1372	SCREW	
B604	VHD1372	SCREW	
B606	VHD1160	SCREW	
B608	VHD1160	SCREW	
B609	VHD1406	SCREW	
B610	VHD1161	SCREW	
B611	VHD1161	SCREW	
B612	VHD1161	SCREW	
B613	VHD1161	SCREW	
B614	VHD1161	SCREW	

B615	VHD1162	SCREW	
B616	VHD1162	SCREW	
B619	VHD1163	SCREW	
B621	XQN12+B1	SCREW	
B622	XQN12+A1	SCREW	
B623	XQN12+A1	SCREW	
B624	XQN12+A1	SCREW	
B625	XQN12+A1	SCREW	
B626	XQN12+A1	SCREW	
B627	XQN12+A12FN	SCREW	
B628	XQN12+A12FN	SCREW	
B631	XQN12+B2	SCREW	
B632	VHD1162	SCREW	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
B633	VHD1162	SCREW	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
B634	XQN16+B12	SCREW	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
N601	VHN0324	NUT	
W601	VMX2028	WASHER	
W602	VMX2751	WASHER	
W603	VMX2752	WASHER	
W604	VMX2392	WASHER	
W605	VMX2028	WASHER	
W606	VMX2028	WASHER	
W607	VMX2028	WASHER	
W608	VMX2028	WASHER	
W609	VMX2028	WASHER	
W610	VMX2028	WASHER	
W611	VMX2028	WASHER	

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7.2 Q1& Q2 VCR MECHANISM SECTION (2) PARTS LIST

TOP PREVIOUS NEXT

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark: △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
651	VMD2975	LED HOLDER	
652	VXA6537	SUB SHASSIS U.	NV-DS99/990,NV-DS33,NV-EX3
652	VXA6146	SUB SHASSIS U.	NV-EX1,NV-DS77
653	VXA6151	COVER PLATE U.	
654	VXA6159	CASSETTE UP U.	
B651	VHD1162	SCREW	
B652	VHD1162	SCREW	
B653	VHD1162	SCREW	
B654	VHD1162	SCREW	
B655	VHD1207	SCREW	
B656	VHD1164	SCREW	
B657	VHD1164	SCREW	
B658	VHD1171	SCREW	
B659	VHD1314	SCREW	
B660	VHD1314	SCREW	
B661	VHD1163	SCREW	
B662	VHD1163	SCREW	

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7.3 Q3 VCR MECHANISM SECTION (1) PARTS LIST

TOP PREVIOUS NEXT

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
501	VEG1570	CYLINDER U.	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
501	VEG1495	CYLINDER U.	NV-DS35/55
502	DFX25A7VWC	CAPSTAN U.	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
502	DFX25A7VWB	CAPSTAN U.	NV-DS35/55
503	VDG1284	DRIVE GEAR	
504	VDG1285	CENTER GEAR	
505	VDG1290	INTERFACE GEAR (C)	
506	VDG1291	INTERFACE GEAR (D)	
507	VDG1330	DECELERATION GEAR (A)	
508	VDG1331	DECELERATION GEAR (B)	
509	VDG1297	INTERFACE GEAR (A)	
510	VDG1303	INTERFACE GEAR (B)	
512	VMA9908	PULLEY COVER	
513	VMA9916	T4 GUIDE	
514	VMA9917	TENSION PLATE	
515	VMA0E52	GEAR COVER	
516	VHD1430	CAPSTAN HOLDER	
517	VMC1443	CYLINDER SPRING	
519	VEM0679	LOADING MOTOR U.	
520	VWJ1297	MECHANISM INTERFACE FLEX.	
521	VMP6271	RT FLEX. FRAME	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
522	K0ZZ00000453	MODE SWITCH	
523	VXA6124	S LOAD GEAR U.	
524	VXA6125	T LOAD GEAR U.	

525	VXA6133	PULLEY	
526	VXA6134	CHASSIS RADON U.	
527	VXA6135	CAM GEAR U.	
528	VXA6136	PINCH BEETLE	
529	VXA6137	RELEASE BEETLE	
530	VXA6138	RAIL U.	
531	VXA6169	BOAT RADON U.	
532	VXA6184	S3 BASE U.	
533	VXL2814	EJECT LEVER U.	
534	VXL2815	TENSION LEVER U.	
535	VXL2816	EJECT ARM U.	
536	VXL2897	PINCH ARM U.	
537	VXL2818	IDLER U.	
538	VYK8886	HEAD AMP U.	NV-DS35/55
B501	VHD1155	SCREW	
B502	VHD1372	SCREW	
B503	VHD1372	SCREW	
B504	VHD1372	SCREW	
B505	XQN14+B1FN	SCREW	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
B506	VHD1160	SCREW	
B508	VHD1160	SCREW	
B509	VHD1406	SCREW	
B510	VHD1161	SCREW	
B511	VHD1161	SCREW	
B512	VHD1161	SCREW	
B513	VHD1161	SCREW	
B514	VHD1161	SCREW	
B515	VHD1162	SCREW	
B516	VHD1162	SCREW	
B519	VHD1163	SCREW	
B521	XQN12+B1	SCREW	
B522	XQN12+A1	SCREW	

B523	XQN12+A1	SCREW	
B524	XQN12+A1	SCREW	
B525	XQN12+A1	SCREW	
B526	XQN12+A1	SCREW	
B527	XQN12+A12FN	SCREW	
B528	XQN12+A12FN	SCREW	
B530	XQN16+B2	SCREW	
B535	XQN16+B3	SCREW	NV-DS35/55
N501	VHN0324	NUT	
W501	VMX2028	WASHER	
W502	VMX2028	WASHER	
W503	VMX2028	WASHER	
W504	VMX2028	WASHER	
W505	VMX2028	WASHER	
W506	VMX2028	WASHER	
W507	VMX2028	WASHER	
W508	VMX2751	WASHER	
W509	VMX2752	WASHER	
W510	VMX2392	WASHER	
W511	VMX2028	WASHER	

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7.4 Q3 VCR MECHANISM SECTION (2) PARTS LIST

TOP PREVIOUS

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
551	VMD2975	LED HOLDER	
552	VXA6537	SUB CHASSIS U.	
553	VXA6151	COVER PLATE U.	
554	VXA6159	CASSETTE UP U.	
B551	VHD1162	SCREW	
B552	VHD1162	SCREW	
B553	VHD1162	SCREW	
B554	VHD1162	SCREW	
B555	VHD1207	SCREW	
B556	VHD1164	SCREW	
B557	VHD1164	SCREW	
B558	VHD1171	SCREW	
B559	VHD1314	SCREW	
B560	VHD1314	SCREW	
B561	VHD1163	SCREW	
B562	VHD1163	SCREW	

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